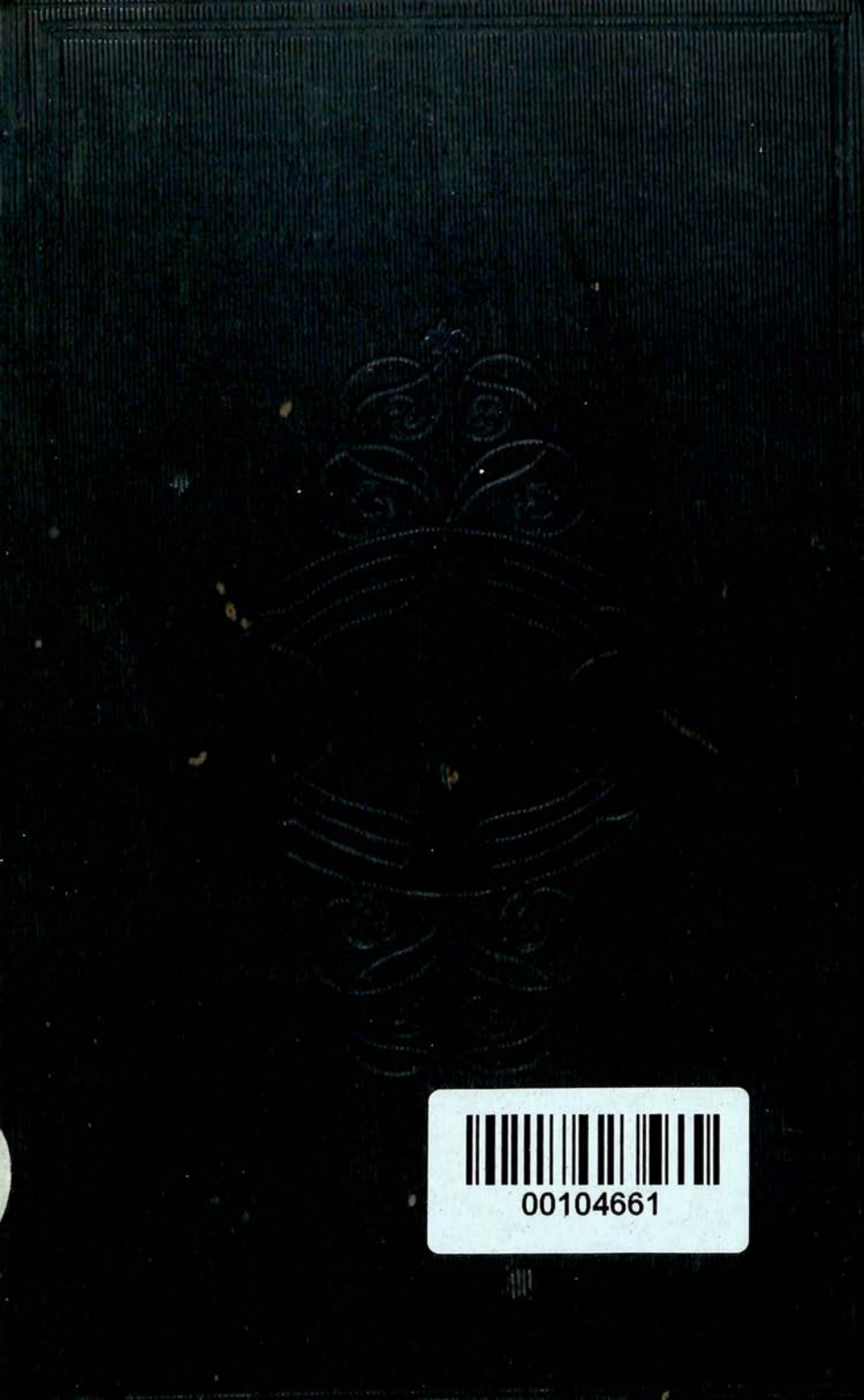
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SAILING DIRECTIONS

RED SEA.

104661

BY

R. MORESBY & T. ELWON, Esqrs.,

COMMANDERS INDIAN NAVY.

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SAILING DIRECTIONS.

THE Directions for the Southern part of the Red Sea, from the Straits of Bab-el-Mandeb to Jiddah, have been extracted from the Memoir written by the late Commander Thomas Elliott, of the East India Company's ship *Benares*, to accompany his portion of the Survey. For the part north of Jiddah the Directions were written by Commander Robert Moresby, of the East India Company's ship *Palinurus*, by whom that part of the Survey was executed.

In the Index it has been deemed advisable to insert the names not only as they are written in the Chart, but also according to the orthography adopted by the Royal Asiatic and Geographical Societies. The latter are printed in italics and within brackets. This important addition has been kindly supplied by the Rev. G. C. Renouard, Foreign Secretary to the Royal Geographical Society of London.

The Names in the Arabic character on the Chart were written by Mr. Rassam, a gentleman who accompanied Colonel Chesney to England, as interpreter. The Longitudes have been determined by chronometric measurements from Bombay to Maculla, Maculla to Mocha, and from Mocha to Jiddah, made during the years 1829, 30, 31, 32, 33, and 34, an abstract of which is given by Capt. Moresby—Bombay being considered in 72° 54′ 36″. The trigonometrical survey of India, based upon the longitude of Madras, which is considered to be 80° 17′ 21″,* places the longitude of Bombay about three minutes more west, *viz.* 72° 51′ 15″.

* Recent observations make it in 80° 14′ 0″, which, if confirmed, will of course affect the position of Bombay, as well as all those places depending upon it.

CHART OFFICE,
East-India House,

ABSTRACT

OF

CHRONOMETRIC MEASUREMENTS.

From Bombay Apollo Pier to Maculla.

		°	′	″
Palinurus' Watches in 1830..	1st.	23	29	0
	2nd.	23	54	30
Ditto ditto in 1832..	1st.	23	43	0
	2nd.	23	50	0
	3rd.	23	45	30
	4th.	23	44	45

Mean diff. of longitude between Bombay and Maculla, 23° 46′ 7″.

From Bombay Apollo Pier to Mocha.

		°	′	″
Benares' Watches in 1829 ..	1st.	29	35	24
	2nd.	29	31	34
	3rd.	29	37	2
Ditto ditto in 1831	1st.	29	38	9
Ditto ditto in 1831 ..	1st.	29	37	31
	2nd.	29	39	6
	3rd.	29	37	6
Palinurus' Watches in 1832..	1st.	29	33	23
	2nd.	29	41	16
Benares' Watches in 1834 ..	1st.	29	39	15
	2nd.	29	40	15

Mean diff. of longitude between Bombay and Mocha 29° 37′ 18″.

From Maculla to Mocha.

		°	′	″
Palinurus' Watches in 1832..	1st.	5	50	45
	2nd.	5	51	30

	°	′	″
Mean diff. of longitude between Maculla and Mocha	5	51	7
Ditto ditto Maculla and Bombay ..	23	46	7
Diff. of longitude between Bombay and Mocha	29	37	14

CHRONOMETRIC MEASUREMENTS.

From Maculla to Jiddah.

		°	′	″
Palinurus' Watches in 1829..	1st.	9	52	0
	2nd.....	9	53	15
	3rd.....	9	51	46
Ditto ditto in 1830 ..	1st.	9	53	46
	2nd.....	9	51	16
Ditto ditto in 1832 ..	1st.	9	53	45
	2nd.....	9	51	45

Diff. of longitude between Maculla and Jiddah 9° 52′ 30″.

From Mocha to Jiddah.

		°	′	″
Benares' Watches in 1829 ..	1st.	4	3	1
	2nd.....	3	59	17
Ditto ditto in 1831 ..	1st.	4	3	39
	2nd.....	4	2	33

	°	′	′
Mean diff. of longitude between Mocha and Jiddah ..	4	2	7
Ditto ditto Mocha and Maculla..	5	51	7
Diff. of longitude between Maculla and Jiddah ..	9	53	14
Mean diff. of longitude between Maculla and Jiddah..	9	52	52
Ditto ditto Maculla and Bombay	23	46	7
	33	38	59

Making Jiddah in 39° 15′ 37″ East longitude from Greenwich, allowing Bombay to be in 72° 54′ 36″. At page 75 Jiddah is stated to be in 39° 18′ 15″, which is a mistake.

CONTENTS.

PAGE

Description of the Coast, and Directions for Sailing from the Straits of Bab-el-mandeb to Mocha 1

Directions for approaching Mocha from the southward, and anchoring in the Roads 3

Description of, and Directions for, the Coast of Africa from Jibbel Seajarn to Ras Billool 5

The Islands and Rocks between Ras Billool and Jibbel Zoogur, including the Mah-heb-bakah Group and Harnish Islands 9

Islands and Rocks adjacent to Great Harnish Island ... 10

Recapitulation or General Description of the Group of Islands and Rocks extending between Bas Billool and Jibbel Zoogur 14

The Coast of Yemen from Mocha to Loheia with the Islands forming the Inner Channel, and others across the Outer Reef to that place, with the Zebayer Islands and Jibbel Teer 15

Directions for proceeding from the Southward through the Channel close to the west side of Camaran, towards Loheia 24

Zebayer Islands 25

The Coast of Yembo, from Loheia to Ras Toorfah, with the

PAGE

Islands on the Outer Reef, forming with the Coast the Inner Channel, and others across the Outer Reef, with anchorages, to 17° 14′ of North Latitude 27

The Coast of Arabia, from Ras Toorfah to Coomfidah, with the opposite Islands and Shoals upon the Inner edge of the Outer Reef, forming the Inner Channel 48

The Coast of the Hedjaz from Coomfidah to Leet, with the Islands and Shoals on the Inner edge of the Outer Reef, forming the Inner Channel 59

The Coast of the Hedjaz from Leet to Jiddah, with the Reefs and Shoals lying off, and near to the Coast 72

Jiddah Town, &c. 74

Directions for approaching and entering Jiddah Harbour ... 81

Continuation of the Outer Reefs from Leet to Jiddah ... 84

The Inner Channel from Camaran Island to Leet 85

The Coast of Arabia from Jiddah to Tirahn Island, and thence to Ras Mahommed 88

The Straits of Jubal, and Gulf of Suez 109

Description of, and Directions for, the Coast of Abyssinia, from Ras Billool to Ras Hurub, and thence to Coobach ... 125

Description of the Eastern and Northern Islands upon the Dhalac Bank 138

Description of the Southern and Western Islands upon the Dhalac Bank, forming the Southern Channel to Massowah; and the Coast and adjacent Islands from thence to Suakin 149

Description of Core Nowarat 159

Inner Channel to Suakin 165

Description of the Coast of Nubia from Suakin to Core Dullow, with the Islands and Reefs 172

General Description of the Outer Reefs and the Inner Channel, from Suakin to Core Dullow 183

PAGE

The Coast of Nubia and Egypt, from Core Shenab to the Island of Shadwan, at the entrance to the Straits of Jubal 187

Gulf or Sea of Akabah 200

Shoals, &c. in the centre of the Red Sea 205

The Centre Channel of the Red Sea 206

Inner Channel, Arabian side south of Jiddah 206

Inner Channel, African side 208

Channels from the Centre to the Inner Channels 209

Winds and Weather in the Centre Channel, and including that part of the sea south of 15° latitude 211

Winds and Weather in the Inner Channel 213

The Tides and Currents 214

Winds and Currents between Suez and Jiddah 216

Winds and Currents in the Red Sea, by Commander Rogers 220

SAILING DIRECTIONS

FOR THE

RED SEA.

DESCRIPTION *of the* COAST *and* DIRECTIONS *for* SAILING *from the* STRAITS *of* BAB-EL-MANDEB *to* MOCHA.

[The bearings are all *true*, unless otherwise stated.]

THE STRAITS OF BAB-EL-MANDEB are 14½ miles wide at the entrance, between Bab-el-mandeb Cape and the opposite point or volcanic peak, called Jibbel Seajarn. Near the former cape is Perim Island, which divides the two Straits at the entrance, the larger being about 11 miles wide. Perim is a bare rocky island, about 4½ miles long by 2 broad, rising 230 feet above the level of the sea, and without fresh water or inhabitants. On its S.W. side is a good harbour, 800 yards broad, with an entrance half a mile wide, with six and seven fathoms water, and a muddy bottom. The harbour forms in two branches, and that to the N.W. appears the best: there might be some difficulty in getting out of this place in southerly winds, and it might be found necessary to warp to the southernmost point of the island, to clear the west side of the entrance. A bank extends off the north part of Perim half a mile, with four and five fathoms on its outer edge; it commences at the N.E. part of the island, gradually increasing to the north, and from thence slopes away to the island, and ceases on the N.W. part.

Bab-el-mandeb Straits.

Perim Island.

Perim Harbour.

Shoal Bank

Little Strait.

The narrowest part of the Little Strait is nearly one and a half mile wide, from the N.E. part of Perim Island to

Fisherman's Rock.

Fisherman's Rock, called also Pilot Island or Oyster Rock, on account of the abundance of excellent oysters found on it. From Fisherman's Rock to the lower cape of Bab-el-mandeb to the north, is all shoal water in rocky patches, but there are 11 fathoms a little without this rock, gradually increasing to the centre of the channel, where there are 12, 16, and 17 fathoms, hard sand, and 7 and 5 fathoms close to the island of Perim. There are also 6 and 7 fathoms water in a small bight to the south-eastward of the Fisherman's Rock, at the termination of the reef off that island.

Anchorage.

Ships may anchor under Bab-el-mandeb Cape in $6\frac{1}{2}$ fathoms water, with the cape bearing S. by W., and the extremes of Perim Island from S.15° W. to S.12° E.

Zee Hill and Shoal.

From Perim Island $16\frac{1}{2}$ miles N.$1\frac{1}{2}$°E. is Zee Hill, and 40 miles N.14° W. is the town of Mocha. Zee Hill is a small but remarkable peak of rocky land like a gunner's quoin, close to the beach; there is no other like it, hereabouts, the land being low, with high hills in the interior; this hill has shoal water running off it, with 5 fathoms on its outer edge, which continues to some distance southward. At 4 and 5 miles to the southward of Zee Hill, are 2 reefs with 3 fathoms between them and the shore; the latter has 2 fathoms on it, and there are 5 or 6 fathoms close to their outer edge. The soundings along the coast are tolerably regular, and the lead is a sufficient guide in approaching it.

Description of Mocha.

MOCHA. The town of Mocha is enclosed by a wall with several forts and towers, occupying a space about half a mile square; many of the buildings within it are in ruins or in a state of great decay. The houses generally are large and built with stone: there are also several mosques

with lofty minarets, and the whole being whitened with *chunam* have an imposing effect when seen from sea. It has several batteries towards the sea, namely, the centre or jetty battery, a little north of which, opposite the old factory, is a five-gun battery; and beyond that is the north fort, situate upon a sandy spit to the N.W. of the town. The south fort is in a ruinous state upon a sandy beach to the S.W. of the town. This place has an extensive bazaar, and is well supplied with beef, Abyssinian sheep, fruits, and vegetables; very good bread may also be had, but there is no biscuit. The water is brackish and dear. Supplies.

Mocha Roads lie to the westward of the town, and the depth is moderate from 3 to 6 fathoms; but there are three shoal rocky patches which should be avoided in sailing in or out, and anchoring. One of these lies one mile due west from the south port; it is about half a cable length over, has 2 fathoms on its shoalest part, and from 3 to 6 fathoms close to it: the other is nearly 2 miles to the S.W. is about the same size, has $2\frac{1}{2}$ fathoms on it, and 4 fathoms close to it; between it and the shore are 7 and 6 fathoms. The third lies about $\frac{3}{4}$ of a mile W. by S. from the north fort, is a cable length over, with $2\frac{3}{4}$ fathoms as the least water, and $3\frac{1}{2}$ fathoms between it and the fort. Variation 6° 30′ W. in 1831. Mocha Roads.

Directions *for* approaching Mocha *from the* Southward *and* anchoring *in the* Roads.

Ships having entered the Straits of Bab-el-mandeb and passed Perim Island, should steer along the Arabian coast about N.b.W.$\frac{1}{2}$W. or N.N.W., keeping without the depth of 12 fathoms, in order to avoid a shoal said to exist between Cape Bab-el-mandeb and Zee Hill, but which the Directions from Perim Island to Mocha.

surveyors could not discover, and also to keep clear of the sand and rocky banks which project out from Mocha Roads.

Anchorage in Mocha Outer Road.

When the mosque bears E.15° N. true, they will be off the westernmost part of Mocha sands, and may haul to the N.E. keeping along the edge of the bank and anchor in 6 or 7 fathoms, with the north fort bearing true east, distant 2 or 2½ miles; or run in with this true bearing of the north fort, and anchor in 5 or 4 fathoms with the south ruined fort bearing S.20°E. true. Vessels drawing only 13 feet may luff closer in and anchor in 3 fathoms. The north fort bearing east, carries a vessel pretty close to the north part of the northern rocky patch on the outer banks.

DIRECTIONS *for* PASSING INSIDE *the* BANKS.

Anchorage in Mocha Inner Road.

After passing Zee Hill (before described) keep along the coast in 7 or 6 fathoms, and when the north fort bears N. 35°E. true, steer for it, or keep it a little more to the north to make sure of passing on the inside of the 2½ fathoms patch, before the south ruined fort and mosque are in one.

This course will lead between the south ruined fort and a 2 fathoms patch west of it in 3 fathoms: in this depth is the most convenient anchorage west of the jetty, between the northern rocky patch and shore reef. This inner anchorage is only half a mile wide.

High land within Mocha.

Of the high land within Mocha, there is a remarkable piece of table-land called Jibbel Nar or Barn, which when on with the mosque at Mocha, bears east; to the southward of this and to the S.E. of Mocha, is another remarkable part of the highest land, appearing as if covered with ruins, and named South Peak.

DESCRIPTION *of and* DIRECTIONS *for the* COAST OF AFRICA *from* JIBBEL SEAJARN *to* RAS BILLOOL.

The S. W. point of the Straits of Bab-el-mandeb is distinguished by a peaked hill named Jibbel Seajarn, and to the eastward of it about 6 miles, are six small volcanic islands called the Brothers. The northernmost of these, named the High Brother, has 29 fathoms close to it, and is about 9 miles south of Perim Island, the Large Strait lying between them. High Brother.

N.38° W., distant 17 miles from the point of Jibbel Seajarn, is Doomairah Island, lying at a short distance from the Abyssinian Coast. Two small rocks, about 7 feet above water, lie N.27° W. from Jibbel Seajarn, at about 1½ mile from shore; 20 fathoms are near to them, and an irregular channel between them and the main: between these rocks and Doomairah Island the soundings along the coast appear to be regular. Doomairah Island is about half a mile square and of great height, running up to a remarkable sharp peak in the centre, called Jibbel Doomairah. The island is but a short distance from the main land, from which it is separated by a narrow channel of 5 fathoms; there is a small rocky island nearly joining it to the eastward, and a rocky shoal of 2½ fathoms about a mile from it to the northward. To the N.W. of the island, and beyond the shoal just mentioned, the coast forms a small bight which extends away afterwards to the North and N.W. to a low sandy and swampy cape called Ras Sintuar, in which space the soundings gradually decrease to the shore. Doomairah Island. Jibbel Doomairah. Ras Sintuar

At about 7 miles from Doomairah Island a reef commences near the shore and runs to N.N.W. and N.W., terminating in a point formed by its western edge at the

distance of 5 miles north of Ras Sintuar. The point of
Ras Mdcawa. this reef is called Ras Macawa. It extends about 4½ miles east of Ras Sintuar, and has on its western edge several islands forming the east side of the eastern channel into Assab Bay, fit only for very small craft. The soundings appear pretty regular in approaching the east side of this reef to 5 fathoms on its edge, and to the depth of 30 fathoms from 4 to 4½ miles off it.

DESCRIPTION OF ASSAB BAY.—This bay is nearly 16 miles in length and upwards of 5 miles in width in the broadest part, but there are many small and low islands in the entrance forming small channels into it, from half a mile to one mile in breadth. It is bounded to the S.E. and E., by a bank of islands extending off the coast, of which Ras Macawa is the extreme, and which has already been described, and by others which bound it on
Darmabah. the N.E. and N., the largest of which, called Darmabah, lies within the bay, and is nearly 20 miles in circumference, very low, and partly covered with jungle. To the northward of Darmabah and westward of Ras Macawa is a reef extending W.b.N.½ N. about 7 miles, with an island
Jeserat Dilcose. on and near each end; that to the east called Jeserat Dilcose, and the one on the west end about 2 miles long,
Jeserat Fartmar. covered with wood, Jeserat Fartmar.—This reef is about 3 miles wide, and forms with the north side of Jeserat Darmabah one of the principal channels into the bay; its entrance is between Ras Macawa and Jeserat Dilcose, the depth being from 10 to 6 fathoms. The channel to the S.E. of Darmabah is very narrow, and has at the most 2 fathoms. There is a small bank of 5 and 6 fathoms lying about 4 miles N. 18°E. of Ras Macawa (a low woody island before spoken of), with 12 fathoms to the S.W. of it, gradually decreasing to 6 fathoms off the eastern part of

the north shoal that extends from Jeserat Dilcose leading into Assab Bay between it and Ras Macawa. There is also a 2 fathom-shoal one mile to the west of Jeserat Fartmar; and another shoal is said to be to the north of that island.

Entrance to Assab Bay, directions for.

The best entrance into Assab Bay is between the 2 fathom-shoal off Jeserat Fartmar and the opposite projecting cape of the coast called Ras Loomar, distant about 2½ miles. Steer from thence to the south, passing to the eastward of two small sandy islands surrounded by a reef, lying off a small bight in the coast to the southward of the cape, and leaving all the other islands to the eastward. The soundings inside the bay are 6 and 7 fathoms, mud.

Wood and fresh water near Ras Loomar.

Wood may be procured on the islands, but water is scarce and brackish, and only to be found at three wells a little to the south of Ras Loomar.

Sunnahboar Island.

Off the north part of Ras Loomar is a high pyramidal rocky island, small in circumference, bounded on the S.E. and W. by a bank extending three-quarters of a mile from it, with a narrow channel between it and the shore, with 5 and 6 fathoms water in it; it is called Sunnahboar, and is in lat. 13° 4′ N.

Ras Billool.

Fourteen miles N.47°W. from Sunnahboar Island is Ras Billool. The soundings are regular along this part of the coast and the little reef off it, till within 5 miles of the cape, where it is more indented with some low sandy islands on a reef which extends about one mile off shore, and terminates at the N.E. part of the cape.

The land of Ras Billool is rather high, with an oblong hill jutting out to the north about 2 miles, which forms a square cape with a bay on its west side. There is little or no reef off the north side of the cape or on its western side. Billool Bay is upwards of 7 miles broad east and west, and 3 miles deep. Two miles S.W. of the inner

Billool Bay.

part of the cape is a small island surrounded by a shoal on the S.E. and W., having between it and the coast 5 fathoms. There is also a bank to the W.N.W. of the cape, distant from it 3½ miles. It is of circular form, 2 miles broad, and has mostly 2 fathoms on it: there is apparently a channel between it and the main about 2 miles broad, as the soundings inside the bank were 10 and 11 fathoms mud, and 12 on its east side. In the outer part of the bay there are 16 and 14 fathoms very gradually decreasing inward. This bay affords excellent protection from southerly winds, but is quite open and exposed to those from the north.

Neither village nor inhabitant was seen in the neighbourhood; but the pilot said that there is a small village called Billool, about 2 miles in shore on the eastern side of the bay, and that there is a trade from this place to Mocha.

Description of the land in the interior.

The appearance of the land from the Straits to this place is high, rugged, and mountainous towards the interior, quite barren, and decreasing in several ranges towards the coast, where there are several remarkable and detached hills of great elevation; those that were visited were rocky, and had a covering of coarse, granular, black and lightish brown earth, intermixed with iron-stone, which on Ras Billool had considerable effect upon the needle of the compass.

Jibbel Seajarn.

Jibbel Seajarn, as before mentioned, is a peaked hill of the haycock shape, situated upon a point of land forming the western side of the Large Strait of Bab-el-mandeb, at the entrance of the Red Sea. Jibbel Haddally is a remarkable lump on the nearest range of hills, 15 miles to the westward of Jibbel Seajarn. Jibbel Doomairah, already described, is on the island of that name, off Ras Doomairah; it is called by Captain Court, the Premenas.

Jibbel Doomairah.

Jibbel Abbooloo is a small piece of table-land in the near range of hills, about 14 miles W.S.W. of Doomairah Island. Beach Hummock is the larger of two conical hills to the south-west of Assab Bay; Jibbel Marsub, or Small Saddle, so called from its resemblance, is 3 miles to the south-westward of Ras Loomar, the north point of entrance to Assab Bay. High Saddle is 9 or 10 miles in a direction nearly west of the Small Saddle, and resembles it in some views, but is much more towering, being part of a higher range. First and Small Peaks are two remarkable hills or pyramids between the Saddles; and Haycock Hill is of a similar shape, but situated 3 miles to the W.S.W. of the high small island of Sunnahboar, near the coast, and already mentioned. Ras Billool is an oblong hill, rather high, and jutting out to the north. Cap Hill is a small round hill in the south part of Billool Bay; and 3 miles W.S.W. of it is another hill, resembling Paps, and called Booby Hill. 26 miles west of Ras Billool there are two remarkable elevations upon a range and near each other, which we have called Barn Hill and Chimney Peak, from their resemblance thereto. Further to the N.W. the land is high and mountainous, but was only seen occasionally, in consequence of hazy weather.

Jibbel Abbooloo. Beach Hummock. Jibbel Marsub. High Saddle. First and Small Peaks. Haycock Hill. Ras Billool. Cap Hill. Booby Hill. Barn Hill and Chimney Peak.

The ISLANDS *and* ROCKS *between* RAS BILLOOL *and* JIBBEL ZOOGUR, *including the* MAH-HEB-BAKAH *Group and* HARNISH *Islands.*

The first of these is a small rocky island of considerable height, called Sayel, lying 6 miles N.b.E. from Ras Billool; about 5 miles E.N.E. of Sayel is a similar white rocky island, called Harbee. About N.$\frac{1}{2}$W., 5 miles from

Sayel Island. Harbee Island.

Sayel, is a small but high rocky island, and at 3 miles N.E. b. N. from it is a similar one; these are the south-

Mah-heb-bakah Islands.

westernmost of a group of five, called the Mah-heb-bakah Islands. The three northernmost of these islands, the centre one of which resembles a haycock, are higher than the other two, and are near each other, with deep water between them. About N.N.E. 7 miles from the north-easternmost of the Mah-heb-bakah Islands, lies the S.W. end of Great

Great Harnish Island.

Harnish Island, in lat. 13° 39′ N. and long. 42° 44′ E. From thence it extends about 10 miles N.E.¼N. and is 3 miles in breadth at the broadest part; the highest part is near the centre, which forms in some views a remarkable bluff. There is a good deal of grass in the valleys, and plenty of antelopes. The west side of this island is steep, having no bottom at 100 fathoms close to, in some places; but along the eastern side the soundings are tolerably regular, affording

Anchorages.

anchorage from northerly winds. One of these anchorages has a depth of 11 or 12 fathoms near the N.E. end of the

Haycock Island.

island, with a small island called the Haycock, bearing north; here the bottom is sand and rock: but the best is near the S.W. end of the island, in 16 fathoms sand, with

Double Peak Island.

Double Peak Island to the east.

Islands *and* Rocks *adjacent to* Great Harnish *Island.*

Sule Harnish Islands.

Sule Harnish Islands, three in number, connected by a reef, are about 2½ miles from the S.E. part of Great Harnish, with a good channel between, there being 20 fathoms close to these islands; the same on the edge of the Great Harnish sandy bay anchorage, and 23 in mid channel, deepening to 30 south of the S.E. part of Great Harnish. They are of considerable height: the northern one is very steep, with two small peaks close together, from

whence we called it Double Peak Island; the southernmost is nearly 2 miles long and 1 broad, and is high and rugged, and hence its name. To the east of these islands, from 1 to 2 miles, is Round Island, and Rock Island, with channels of 22 and 25 fathoms between: the former is rather high and rocky; the latter consists of low black rugged rocks, and 2½ miles to the eastward of it is a rock above water. Round and Quoin Islands, so named from their shape, are 1¼ to 2 miles from the centre of the eastern side of Great Harnish, with a channel of 26 fathoms along Great Harnish, but there were no soundings taken between them. The remains of a crater were found on Round Island: two miles S.W. of it, and ½ a-mile from Harnish, are some black rocks above water, with 9 fathoms rocks near them on the east, 12 and 17 half-a-mile off, and 27 between them and Round Island. Haycock is off the north part of Harnish, separated from it by a narrow channel of 9 and 10 fathoms; it resembles a haycock from the south, but on passing close to the eastward of it the inside appears to be hollowed out like a saucer. Addar Eyle, or Sugar-loaf, are two small pyramidal rocks of some height, one mile east of the Haycock, with a channel of 35 fathoms between; they are of the same colour as the latter island: and Mooshedgerah is a low small island 3 miles east from the north part of Great Harnish. Besides these there is a rock above water, at 2 miles, and another at 4½ miles off the south part of Harnish, and a cluster of rocks awash and a little above water 6 miles to the west of the south point of Harnish, or 6 miles N.N.W. of the Haycock Island, forming the N.E. part of the Mah-heb-bakah Islands, with good channels beween.

Round and Rock Islands.

Round and Quoin Islands.

Haycock Island Channel.

Addar Eyle.

Mooshedgerah.

Rocks above water.

LITTLE HARNISH ISLAND is about 4 miles north of Great Harnish, with a good channel of 35 to 40 fathoms between

Little Harnish Island.

them. It is of an oblong shape, of great height, with a remarkable piece of land on the summit of the east end, resembling a thumb or a small peak in the act of falling off the top of the land, when observed from Great Harnish Island, and hence we have named it Tumble-down Peak. This island is upwards of seven miles in circumference, very rugged, with grass in some parts, and a few antelopes. On the N.E. and E., about ½ a-mile from it, are some rocky islands, a part of them connected to the north part of Little Harnish by sunken rocks, but there is a narrow channel of 15 or 16 fathoms between them on this side, and on the other side is deep water.

Tumble-down Peak.

Jibbel Zoogur. JIBBEL ZOOGUR.—About 2 miles to the northward of Little Harnish is the south end of Jibbel Zoogur, with a good channel of 36 and 37 fathoms, mud, between them. Zoogur is by far the highest island in this sea, and may perhaps be considered a small mountain; it is 28 miles in circumference, and nearly 9 miles long from south to north, composed of a series of lofty hills of barren aspect, which in some views appear as sharp peaks, but on running along by the east side of the island they assumed the appearance of the inner side of a funnel. The highest peak in the island is about 3 miles to the north of an anchorage in the western bay, inside of Sandy Peak Island, hereafter described.

Highest Peak.

Anchorages. The only apparent good anchorage about this island is in the two small sandy bights on the S.W. part of it, the easternmost of which is the largest, though perhaps the least commodious, as the smaller one appears to be that used by the native boats, where there are a few straggling huts and some trees. These anchorages are in the bottom of a small bay, in breadth two miles and depth one, formed by Sandy Peak Island on the west, which is separated from a point of

Sandy Peak Island.

Zoogur, between which is a channel of 70 yards width, with 7 fathoms from side to side. Across the entrance of the bay the soundings are 30 to 36 fathoms, with an irregular decrease, there being 9 fathoms at a short distance from the shore reef in the western bight, and 9, 13, and 15 fathoms in the eastern. From the situation of this bay, it affords good protection from a northern sea.

As there is no protection on the Arabian coast opposite Zoogur, it may be as well to say something more of its north side, where the *Palinurus* anchored against strong South winds, in March 1831. On the N.E. part of the island is a sandy spit, and 1 mile north of it is a small island called High Island: the soundings between them is 17 fathoms sand, near the spit, increasing to 24 near the North Island. In this space the ship anchored in 22 fathoms mud; but to avoid being too near the small island, it would be better to anchor more to the Westward, where there are 15 fathoms near the shore reef, and 24 and 30 at half a mile from it. The most eligible place, in cases of emergency, appears to be on the N.W. part of Zoogur, where there are 7 to 10 fathoms close in, and 23 fathoms at half a mile off. On the north side of the island the wind blew in severe gusts off the high land, but the water was quite smooth.

High Island.

Anchorages.

Good water may be obtained at about a mile and a half to the northward of the bay formed by Sandy Peak Island (where they anchored in 9 fathoms sand) by digging a hole in the sand, which is black; but it is difficult to get it off in casks over the rugged reef, with which the shore is lined. Wood may also be had on the north and south parts of the island, and grass in some of the valleys, where antelopes were found. There are no people constantly residing on this island, but it is resorted to by fishing-boats from

Good fresh water.

Wood.

Maculla, for a cargo of the Red Sea productions, amongst which are sharks' fins, salted fish, and turtle.

Tongue Island.

Tongue Island, so called from its shape, is more than 2 miles from the South-west end of Zoogur, with a small island and some sunken rocks near its east side, and 34 fathoms between them in a small bight. These rocks are a part of the reef which extends in patches from the N.E., end of the island to the small island close to it on the S.E. There is a small island about a mile W. by N. from Sandy Peak Island. Aboo Eyle Islands are situate off the N.E. part of Zoogur, and are of considerable height. High Island is the westernmost of them, and is rather flat at top; the other three are close together. The westernmost we have called Quoin Island, and the easternmost Pile or Lump Island. The N.E. point of Zoogur is in lat. 14° 5′ N. and long. 42° 48½′ E.

Aboo Eyle Islands.

Quoin and Pile Islands.

Recapitulation *or* general Description *of the* Group *of* Islands *and* Rocks *extending between* Ras Billool *and* Jibbel Zoogur.

The islands comprising this group are mostly volcanic hills of a dark and barren aspect, with rocky eminences in fanciful or romantic shapes, covered with a loose granular black, brown, or sandy coloured earth and ashes, or strewed with pieces of sharp rock. The principal, as before stated, are the Zoogur and Harnish Islands, which are surrounded by many small ones of various heights, to which appropriate names have been given, according to their different shapes. In some of the largest the remains of craters are very evident, having all the appearance of being originally high peaked islands, reduced to the present saucer shape by internal explosions; and the neighbouring smaller islands and rocks to the E.S.E., South, and S.W. of Harnish, being

of similar formation, leads to a belief that they have been formed by the same means. No sunken patches were discovered between any of this group from Ras Billool to Zoogur, all the dangers being above water, so that vessels running either up or down this sea, can pass through any of these channels during the day with safety; but it may be advisable not to attempt to pass through the smallest ones between the north-easternmost of the Mah-heb-bakah Islands, or through the 9 fathoms channel between the north part of Harnish and Haycock Islands off it, for fear of baffling winds.

The COAST *of* YEMEN *from* MOCHA *to* LOHEIA *with the* ISLANDS *forming the* INNER CHANNEL *and others, across the* OUTER REEF *to that place, with the* ZEBAYER ISLANDS *and* JIBBEL TEER.

Mersa Fedjerah.

About N.$\frac{1}{2}$E., 16 miles from Mocha, is Mersa Fedjerah, fit only for boats in less than 4 fathoms, to the south of which the coast projects a little, and in some degree breaks off the swell in southerly winds. Between Mocha and this place the soundings are regular. Seven miles further north is the village of Mousa, where good water may be obtained; it may be known by a small white mosque on its point. To the north of Mousa 4$\frac{1}{2}$ miles is the village of Cocha. Sh'haree is also a small village where good water may be procured: it is about 9 miles N.N.W. from Mousa, and may be known by a small white mosque on a cape about 1$\frac{1}{2}$ mile to the north-west of it, called Goobut-el-Hamar. The soundings being regular along the coast from Mersa Fedjerah, a vessel in want of water may anchor in any convenient depth off the said places to obtain it. About 11$\frac{1}{2}$ miles N.W. from Sh'haree and 41 miles

Mousa, good water.

Cocha and Sh'haree, good water.

Goobut el Hamar.

Ras Miltanah. N.b.W. from Mocha, is Ras Miltanah, and to the north of it to the distance of 2 miles, three small rocky patches on which the sea breaks. This cape is in lat. 14° 0′ N., the east side of Jibbel Zoogur being 16 miles west of it, the soundings deepening gradually from the coast, and the deepest water between is 39 fathoms. Three small pyramidal hills, called the Three Sisters or Jibbel Mousa, are near the coast between Mersa Fedjerah and Mousa.

Jibbel Mousa.

Seven miles north of Ras Miltanah is Ras Zebeed, off which is a small shoal on which the sea breaks, and about 1 mile to the N.E. of it is an excellent spring of fresh water, emptying itself into the sea. The rushes about its mouth are easily distinguishable from the anchorage off it in 4½ fathoms, and there are also some trees and bushes in its neighbourhood by which it may be known. Jibbel Zoogur Peak bears from this anchorage S. 74° W.; and it is to be observed that this being an open coast, if there is any surf on the beach it will be difficult and even dangerous to attempt getting water here at such times. N. 5° W., distant 7½ miles from Ras Zebeed, is Kedf Ocraish Bluff. N.N.W.½W., 23 miles from this bluff, and N. 17° W., distant 37 miles from Ras Miltanah, is a long projecting point of land called Ras Mejarmla. This is the N.W. point of an inlet of the sea running in to S.S.E. about 10 miles, called Core Goulafugger, near the extremity of which is a small sand-hill in form of a haycock, called Kedf Muckyesh, seen in clear weather when approaching Ras Mejarmla from the southward. At the distance of 3½ and 7 miles S.b.E. and S.b.E.¾E. from Ras Mejarmla, are two shoal patches of 1 and 2 fathoms, about 1 and 1½ mile from the coast, with 4 fathoms near them; and at 7½ miles S.W. b. S. is a patch of 5 fathoms, with 28 fathoms close outside and 15 within it. Two miles west of the cape is a shoal of 2 to 4 fathoms about 3 miles in length N.b.E. and

Fresh water.

Kedf Ocraish Bluff.

Ras Mejarmla.

Core Goulafugger.

Kedf Muckyesh.

S.b.W., and a mile broad with 12 fathoms close to its outside; between it and the cape are 9 to 4 fathoms. The north part of the cape or Ras Mejarmla is about 3 miles wide, and 2 miles east of it on the east side of Core Goulafugger, at a place called Shoorame, about a mile or more inland, over a beach of soft sand, are some wells of good water. To the north of the Cape is anchorage against southerly winds in 4, 5, or 6 fathoms, and within, to the S.E. of the cape, against all winds, in about 3 fathoms; but there may be some difficulty in getting out against those from the north-westward. About N.¼W., distant 14½ miles from Ras Mejarmla, is Ras Jeddere, the coast between them forming a bight in which the soundings are tolerably regular, with the exception of two patches of 2 fathoms each at 4 and 6 miles north of the former, and the reefs off Hodeidah, which extend about 2 miles to the west of it.

Shoorame, good water.

Ras Jeddere.

HODEIDAH is about 11½ miles N.b.E. of Ras Mejarmla, and about 5 miles south-eastward of Ras Jeddere. It is a large fortified town with lofty buildings, but not so extensive as Mocha. It is one of the coffee ports, and has a considerable bazaar, from whence supplies may be procured. There is said to be plenty of good water, which the natives will bring off in their boats. Vessels may anchor in 4 fathoms, just to the westward of some small patches of reefs in the roads, for which a good look-out is necessary, as the water does not always break upon them. Between 2 and 3 miles to the southward of the town a shoal spit runs off more than a mile, with 1 fathom on its extremity. Hodeidah is in latitude 14° 47′ N., and longitude 42° 59′ E.

Hodeidah.

Supplies of provisions and good water.

About 2 miles west of Ras Jeddere is a patch of 2 fathoms, with 3 fathoms near to it to the N.W., and midway between it and the cape is a rock. Four miles further north is Ras Keteeb, the extremity of a point or tongue of land forming

Ras Keteeb.

a bay or inlet to the south-east. East of this cape about 2 miles is a low island on a reef, extending 1¼ mile from shore; and nearly 6 miles north of the cape is another projecting cape, without a name, forming between them a bay in which the depths are irregular. N.W. by N., distant 18 miles from Ras Jeddere, is Ras el Bayath, and S.E. from it 5 miles is Ras Essah. To the eastward of the latter is a bay of the same name, where a ship may anchor in 8 to 5 fathoms, sheltered from northerly winds, but she must quit it on the appearance of the wind coming from the southward or westward. From Ras el Bayath round Ras Essah, the shore is bordered by a reef, steep-to; and nearly 4 miles S.b.W. from the former is a low island or sand-bank called Rasher, surrounded with a reef, and with 14 fathoms between it and the main.

Ras el Bayath.

Ras Essah.

Rasher.

From Ras el Bayath the coast turns N.E.½N. about 9 miles to a sharp point of land named Ras Arafar, forming between them a bay called Camaran, the north point of which, Jibbel Maharsene, is a piece of high land, having below it a mosque. Twenty miles north of Ras Arafar stands the town of Loheia; the coast forms a bay to the S.E. of the former, and from thence an irregular shore up to the latter, fronted all the way with a reef, which 5 miles south of Loheia extends 2½ miles from shore.

Ras Arafar.

Jibbel Maharsene.

CAMARAN ISLAND.—The S.E. point of this island lies nearly 1⅛ mile N.W. of Ras el Bayath; it extends from thence in a N.b.E. direction above 11 miles, and is from 2 to 4 miles broad. The island is composed of hard rock intermixed with sand, and in some parts earth capable of cultivation; there are some spots on which date trees flourish. The island is generally low, but towards the south there are some elevated parts forming small hills, and on the north it is swamp and jungle. Including Camaran, there are

Camaran Islan.

seven small villages upon this island, mostly consisting of a few miserable huts belonging to fishermen employed in its neighbourhood on the pearl banks, turtle islands, &c. Excepting a small portion of its east side, the island is bordered by a reef, which, off its S.E. point, extends little more than a mile towards Ras el Bayath, whereby the entrance to Camaran bay is reduced to a breadth of 700 yards. There are 4 to 6 fathoms on the edge of the island reef, and in the channel 8 to 11 fathoms mud, the greatest depth being towards the cape.

Inner Channel to Loheia.

In approaching this entrance from the southward, pass inside the little island Rasher, keeping in about 15 fathoms along by the coast reef; keep a look-out for the sandy point of Bayath, and haul round it as requisite for the entrance. There is good anchorage in the small bay of Camaran, near the S.E. part of the island, in 7 fathoms mud, with the fort bearing S.40° W.; distant about 200 fathoms, and the town S.70°W.; but large vessels had better anchor outside in the extensive and remarkable fine bay formed by the island and adjacent coast before mentioned, where are regular soundings and moderate depths: here wood and water may be procured on the island. There is anchorage off the west side of the island in 4 fathoms, opposite Muckram village, known by a few date trees and a small white mosque to the south of it. The reef extends a mile off this part, with a small sandy island on it one mile N.W. of the village. Three miles N.W. of Muckram is a small sandy island with a reef half a mile off its west side, and a little way only off the east end, and has a channel on each side of it. Four miles to the west of Muckram is a dangerous shoal lying in a N.N.W. and S.S.E. direction, in length 4 miles, with 2 and 2½ fathoms near its centre, and 4, 5, and 6 on each end, rocks and sand. There are 30 and 35 fathoms close to the

Anchorage off Camaran Town, and in Camaran Bay

Anchorage off Muckram.

Muckram Reef.

Sandy Island.

Dangerous Shoal.

south end of this shoal, 32 at its north end, and 35 fathoms just within it. Without the above-mentioned shoal, at the distance of 9 miles to the west of Muckram village, is a bank of rocks and sand, with 4 fathoms on its shoalest part; it is about 3 miles long, north and south, and has 30 fathoms near it on all sides. The discoloured water on these shoals may generally be seen. There is a good channel between Camaran island and the inner shoal to the westward of it, where the breadth is about 3 miles, and between Camaran reef and the small island 3 miles to the N.W. of Muckram, 1½ mile wide. The depths running up from the southward are 6 and 10 fathoms near the island reef and 19 in mid-channel; from thence a decrease towards the south end of the inner shoal, but proceeding to sea from the anchorage off Muckram, the depths increase gradually to the north end of the shoal, where there are 35 fathoms. In the channel between Muckram and the island to the N.W. of it, the depths are irregular, 12 and 7 fathoms in mid-channel, and 5 on either side of it; and afterwards 16 and 17 fathoms between Camaran and El Bother, next to be described. From the inner to the outer shoal, passing both from its north and south points, there is a gut of deep water, there being 35 and 40 fathoms near the western side of the inner shoal, and 22 on the eastern side of the outer one, between their south points; and between their north points, 39 fathoms near the inner and 28 near the outer. Should a vessel get between these, a course about N.b.W. for the bluff on the south part of Ockbane island will carry her through.

Bank of Rocks and Sand.

Good Channel.

El Bother Island.

El Bother, about 3 miles to the north-westward of Camaran, is a low sandy island about 3 miles in length, east and west, surrounded by a reef, which extends off the south side 1½ mile, with 5 or 6 fathoms on its edge, rocks and sand.

There is a good channel on either side of this island; that between it and Camaran is 2 and 3 miles wide, with from 10 to 23 fathoms, being bounded on the south by Camaran and the small island to the N.W. of Muckram, and on the north by the reef off the south side of El Bother. Three miles N.W. of El Bother is a patch of 7 fathoms, and 1¼ mile N.E. of its east end is a patch of 1 fathom. About 4 miles west of El Bother is the south end of Ockbane island, which extends thence in a N.W. direction about 4½ miles. It is low and sandy in the centre, with a hill on its N.W. end, and a bluff on the south. There are deep soundings on the east and south sides, and a reef runs along the west side about half a mile off the island, and continues round the north end, where it extends 2½ miles off, and is steep-to, having 23 fathoms near to its west edge and 8 and 15 fathoms on the edge of the reef at the north end, decreasing towards the island. There is a good channel to the south of Ockbane and El Bother into Camaran, and there is also a channel between it and El Bother to Loheia. Any of these channels may be used by keeping a look-out for the patches, which may be seen excepting in hazy thick weather.

Ockbane Island.

Good Channel.

Cadamon Seggeer and Cadamon Kebeer are two low sandy islands to the E.N.E. of Ockbane and north of El Bother. A reef extends from the latter nearly 1½ mile W.S.W. with 5 fathoms on its end, and there is also a 3 fathoms patch about 2 miles west of the island. Three miles N.W. of Cadamon Seggeer lies another shoal about 2½ miles in length, in a N.N.W. direction, having 3 fathoms rocks and sand on it, and 24 fathoms near both sides.

Cadamons Seggeer and Kebeer Islands

Humreek Island, 5 miles to the S.W. of Loheia, is about 2 miles east and west, and 1½ mile wide. This island is low and sandy, with a fishing village on it, but no water, that article being supplied from Loheia. In the centre of the N.E. and west sides are two small white mosques, one of

Humreek Island.

which is used as a mark for the anchorage at Loheia. Between the easternmost point of the island and the extensive reef off the coast the inner channel is not three-quarters of a mile broad.

Shab el Bunjam.

Four and five miles S. b. E. of Humreek island are two small shoals called Shab el Bunjam; and 9 miles southeasterly of it is another small shoal. They lie from 2 to 3 miles off the coast, and may be seen by a good lookout and passed on either side, though it will be as well to pass to the westward of them in going from Camaran bay through the inner channel to Loheia, or the contrary.

Bowarred, Gooban, and Gooseе Islands.

North a little westerly 3½ miles from Humreek and about 7 miles west of Loheia, is the island Bowarred, and to the westward of it four others, forming the north side of a channel from Loheia to seaward, and the contrary. These islands are Gooban, Goosee, Entookfash, and Kotama. Bowarred, Gooban, and Goosee, are low and small, with channels between them: that between Gooban and Goosee is very narrow, and has from 3 to 4 fathoms; between Bowarred and Gooban is a channel of 6 and 7 fathoms. Entookfash lies in an east direction 6 miles in length, and is a low sandy plain, with a hill upon its western end, from which a reef extends 3 miles to N.N.W. with 8 fathoms on its extremity. Antelopes are plentiful, but there is no fresh water on the island; there are two or three huts, occupied by fishermen, who are employed procuring turtle. Between this island and the small islands Gooban and Goosee, off its eastern end, there is good anchorage in 4 or 5 fathoms. The reef on the south side of Entookfash extends more than a mile off shore, and there is also a bank with from 2 to 12 fathoms on it, and black rocks above water, from 2 to 3 miles south of the hill, and a channel between them and the island reef, and from it an outlet to the north of Kotama and reef.

Entookfash Island.

Good Anchorage.

Kotama Island.

Kotama Island, in latitude 15°41 N., longitude 42°21 E.,

is about 21 miles to the west of Loheia, 4 to the W.S.W. of Entookfash, and 8 miles N.N.W. of Ockbane. It is about 3 miles in length north and south, and 1½ mile in breadth; the land upon it is rather high, and there is a hut or two, but no water nor inhabitant. There is also a small square building of coral, containing a grave. This island has a deep water channel on its eastern side, and the other sides are bordered by a bank of sand and coral of irregular soundings, from 14 to 4 and 2 fathoms near the shore on the west side, from whence it extends 2¼ miles, and thence to the southward upwards of 5 miles, also with irregular soundings from 8 to 26 fathoms. This bank forms the south extremity of the outermost extensive bank on the Arabian side of the sea.

Deep-water channel.

LOHEIA town is built of coral and has some large houses; it is surrounded by a wall with several forts and towers adjacent. The principal is a fort on a hill which commands the town and neighbourhood, but it is in a ruined state. The anchorage off this place is in a gut in the coast reef, which runs up to the town in a north-easterly direction where small boats anchor. The entrance is N. 74°E. of the white house or mosque on Humreek Island, or the first high tower a little to the north of Loheia fort on with the northernmost of two small mounds bearing in one N.32°E. A ship cannot go far inside the entrance, and would then be nearly 3 miles from the town; it has also some dangerous patches, and therefore cannot be recommended for general use.

Loheia.

There is an excellent bazaar in the town, generally well supplied with cattle and poultry, excepting during the Ramadan, when the market is not so well attended; flour, onions, and sweet potatoes may be had here, but neither rice nor biscuit. The water is good, but distant from the town, from whence it is brought in jars on camels. Loheia is in latitude 15° 42′ N. and longitude 42° 44′ E.

The distant land within Loheia is high and mountainous and seldom seen. Behind the town are a few hills, but the highest, upon which the fort stands, is not more than 150 feet above the level of the sea. Sugar Loaf is the northernmost of two small peaks to the eastward of Loheia. Jibbel Kushah is an oblong piece of land to the S.E. of Loheia, appearing somewhat like a barn.

Sugar Loaf and Jibbel Kushah.

There is a narrow rocky reef about $1\frac{1}{4}$ mile to the west of Loheia, about 2 miles in length north and south, and two rocky patches about a mile to the westward of it, with $3\frac{1}{2}$ and 4 fathoms near them.

DIRECTIONS *for proceeding from the Southward through the* CHANNEL *close to the west side of* CAMARAN, *towards* LOHEIA.

Having passed Rasher in 24 fathoms, or about 3 miles to the westward of it, steer about north, keeping about one mile from Camaran; and after passing that part of the island reef one mile westward of Muckram village (the outer part of which bears nearly south of the small island 3 miles to the N.W. of it), steer to the north-eastward between that island and Camaran reef, where will be found 12 and 7 fathoms in mid-channel. Having passed the said small sandy island, the depths will increase to 16 and 17 fathoms in mid-channel between El Bother and Camaran island; then, if going round the north end of Camaran, go no nearer than 14 fathoms, as 10 fathoms are near the reef which extends from it about a mile; but if going to Loheia, beware of a one fathom patch about $1\frac{1}{4}$ mile to the northward of the east end of El Bother, and steer direct for the narrow channel at the east end of Humreek Island.

ZEBAYER ISLANDS.

Jibbel Zebayer, the easternmost island, and largest of the group, is 8 miles in circumference and nearly 3 miles in length north and south; it is about 600 feet high, and has three remarkable hills, one forming a cone on its south, and another forming a barn on its north, having between them the third or centre hill, in latitude 15° 3½′ N. and longitude 42° 18′ E. From this island N. b. E.½ E., distant 3 miles, are some low rocks awash with breakers near them to the west, and deep water to the south and east. The second island, or Centre Peak, is about a mile in length, lying to the S.W. of Jibbel Zebayer, having between them a channel half a mile wide, with 19 fathoms black sand in the centre. Saba, or the third island, lies N.W. b.W. of Jibbel Zebayer, having a channel between half a mile broad, with regular soundings of 7 to 12 fathoms black sand, and no bottom at 26 fathoms at a short distance to the S.W. This island is about half a mile over and nearly round, consisting of a sandy plain with two remarkable hills on it: the largest, when approaching it from the eastward, appears like a barn; the other is not so high, but both have craters. To the N.N.W. of Saba, distant 1¾ mile, are breakers, with a channel between them and the island.

Jibbel Zebayer.

Centre Peak Island.

Saba Island.

Connected Island is a most extraordinary high rugged-topped rock, to the S.W. of Saba Island about half a mile, and connected with it by a reef, and is therefore considered as one island in numbering them. The fourth, or Saddle Island, the fifth, or Table Peak, the sixth, or Rugged Island, and the seventh, or Haycock Island, are each about half-a-mile in length and of moderate height. Saddle Island, Table Peak, and Rugged Island are all on one rocky bank, which extends from them one mile to S.E., where there is a rock above water called Low Island; and one mile to the eastward of Low

Connected Island.

Haycock Island.

Saddle Island, Table Peak, and Rugged Island.

Island are the breakers before spoken of, $1\frac{3}{4}$ mile to the N.N.W. of Saba. There is deep water between these breakers and Low Island, and also between them and the low rocks awash N.E.b.N. 3 miles from Jibbel Zebayer. Between Saddle Island and Table Peak there are 3 and 4 fathoms across the bank, and between Table Peak and Rugged Island there are 6, 9, and 17 fathoms, rocks and sand. N.W.b.W. one mile from Saddle Island is a small rock, with deep water between it and Table Peak; and a low black island bears S.S.W. half a mile, with 5 fathoms between it and Saddle Island. There are also 5 fathoms between Saddle Island and the rock on the extremity of the bank to the S.E. of it. Quoin Rock forms the northern extremity of Zebayer group; it is a conical rock or small island, bearing from Jibbel Zebayer N.40°W. distant 10 miles. Between it and Haycock Island no ground was found at 35 fathoms, and there is deep water close to the rock.

Quoin Rock.

Jibbel Teer lies W.$\frac{1}{4}$N. distant 28 miles from Ockbane, and N.W.$\frac{3}{4}$N. 34 miles from Jibbel Zebayer, in latitude 15°32′30″ N. and longitude 41°55′30″ E. This island is nearly of a circular shape, being about $1\frac{3}{4}$ mile from north to south, and $1\frac{1}{2}$ mile broad, with 50 and 60 fathoms close to it. Its perpendicular height is 900 feet above the level of the sea; from the base it has a gradual ascent for half a mile, where a range of hills about 100 yards high commence and terminate in a steep rocky bluff on the south end of the island. From the top of this range is another gradual ascent to the peaks, which are also about 100 yards in height. The largest peak is of a brown colour, and the other forms a beautiful cone when seen from the south and west. They appear to be of volcanic origin, and smoke at the present time issues from some of the craters and bases of the peaks. There is a small sandy patch on the western side where landing may be effected, but there is no anchor-

Jibbel Teer.

age. In crossing from the reef off the north end of Ockbane for this island, 8 fathoms were found on the tail of Kotama reef, 16 miles from Ockbane, 38 fathoms, and shortly after no bottom at 150 fathoms. There are three names for this island; the Indians call it Jibbel Teer, or hill of birds; the El Shoorees of Sohar near Muscat, Jibbel Dokhan, or hill of smoke; and the Arabs and Abyssinians, Jibbel Sebain, or hill without anchorage.

The COAST OF YEMBO, *from* LOHEIA *to* RAS TOORFAH, *with the* ISLANDS *on the* OUTER REEF, *forming with the Coast the* INNER CHANNEL, *and others across the Outer Reef, with Anchorages, to* 17°14′ *of North Latitude.*

From Loheia the coast turns N.E.b.N. about 9 miles, forming a slight bay between; it then turns to north 8 leagues to Ras Mussahrib, in lat. 16° 14′ north, and long. 42°47½′ E., forming a slight curve inward; the whole space being bordered by a reef somewhat less than a mile in breadth, excepting in the vicinity of the Ras, where a shoal patch extends 2 miles off. From Ras Mussahrib the coast bends about N.b.W.½W. a distance of 40 miles, forming a bight with sinuosities to Ras Shamah, a projecting point in lat. 16°52′N., long. 42°34′E., 3 miles S.E. of which is Gurnah Shurnah, a bushy point, the reef bordering the shore all the way to the latter place, about half a mile wide. The coast nearly the whole space from Loheia is covered with jungle, without village, hut, or inhabitant. The town of Gheesan is to the northward of Ras Shamah, and has a few square stone buildings, but the principal part of it consists of grass huts, which are mostly round, with pyramidal tops. It has a large fort in great decay, and there is a small bazaar scantily supplied with such dry provisions as the natives use, but none for ships. Water is very scarce. The

Ras Mussahrib.

Ras Shamah.

Gurnah Shurnah.

Gheesan Town.

population of Gheesan is about 400, employed chiefly in the pearl fishery, &c. on the banks in its neighbourhood. The anchorage is in 7 fathoms about 2 miles off shore, with the fort bearing N.76°E. There is a sunken sandy patch of 2 fathoms in the line of 6 fathoms soundings 1¼ mile to the S.W. of the rocky point of the land, that is, about half-a-mile south of the town. The fort bears about N.35° E. from this patch, distant about 1½ mile, and a small white mosque in the town is in line with a remarkable rock on a hill behind it. The shore reef projects considerably about Gheesan, and the soundings are irregular inside the depth of 7 and 6 fathoms; but there is a place in 3½ and 4 fathoms about a mile off shore, at a short distance from a rocky spot, forming an inner anchorage for small boats off the town. The *Palinurus* anchored in 4½ fathoms sand off the town, the fort bearing E.N.E.½E. and Ras Shamah S.30°E. Gheesan hills cannot be mistaken; they are close behind the town, and have no other high land near them.

Gheesan Anchorage.

Eight miles N.W.½W. from Ras Shamah is the east end of Ferafer Island, which is 2½ miles in length W.N.W., narrow, low, and sandy. Core Aboo-sabah is a bight or arm of the sea about 14 miles deep, running into the coast north of Ferafer Island: the inner and eastern part of it is shallow, but in the southern and western part is good anchorage of 6 and 7 fathoms, formed by a narrow neck of land, the south part of which is called Ras Toorfah. This Ras, or cape, extends within a mile, or little more, of the west part of Ferafer Island, having a good channel of 8 and 10 fathoms between. A little way north, within the Ras, is a small island, to the southward of which is 6 fathoms water, in a small bight for boats. To the E.N.E. of Ferafer Island the coast forms another bight, called Gurnah Watah, with a depth of 6 to 8 fathoms in the outer part of it.

Ferafer Island.

Core Aboo-sabah.

Good Anchorage.

Ras Toorfah.

Gurnah Watah.

Ras Toorfah is in lat. 16°59½′ N, and long. 42°23½′ E. The coast from thence runs nearly north a distance of 27 miles to Shab el Aboo Looker, where it forms a small bight, 7 miles south of which is Shab el Kebbeer. Here the coast reef extends nearly 2 miles from shore, decreasing in breadth both to the north and south, but from Ras Toorfah 15 miles northward there is no coast reef.

Shab el Aboo Looker.

Shab el Kebbeer.

Having described the coast, we shall return to the southward, and commence with

HAMMAR ISLAND, about 4 miles N.W. of Loheia, is low, about 2½ miles in length N.E. and S.W., and three-quarters of a mile wide, having a fishing hut or two on its western side. There is a small bight in the reef off its N.E. part, affording anchorage for small boats. There is little reef on the east and west sides, but it extends off the S.W. part nearly a mile towards the eastern part of Bowarred Island; therefore when passing between it and Bowarred, keep nearest to the latter island. Firewood may be had for cutting on Hammar, but no water.

Hammar Island

West from Hammar 9 miles, and about 3 miles north of the centre of Entookfash, is the low sandy island Tullowain, with a little rise on the eastern part, and surrounded by a reef extending from it nearly a mile.

Tullowain Island.

North-eastward 6 miles from Hammar is a small island near the coast reef, and north of it one mile is a rocky patch. Another rocky patch lies 3½ miles east of Hammar.

Five miles N.W.¼W. of Hammar Island is the low sandy island Dorama, and nearly 3 miles N.N.E. from it is Adjuah Island, its south end being the highest part; and 3½ miles further N.b.E. is Zoorbat Island, upwards of a mile in length and very narrow. These three islands are on the eastern edge of a narrow shoal bank, with 4 or 5 fathoms close to the eastward of it.

Dorama, Adjuah, and Zoorbat Islands.

E.b.S. of Zoorbat about 3½ miles is a small sand-bank or

Dyer Island. island called Dyer Island, and to the S.S.E. of it are two others of the same description occupying a space of 2 or 3 miles, and each of them surrounded by a reef. There is a narrow passage of 6 or 7 fathoms between Dyer Island and the other two, but it is best to pass either to the east or west of them.

Beree Islands. At 6 miles to S.W. of Zoorbat, and to the west of Adjuah, are the two Beree islands, small and low, with a fisherman's hut on the north end of the inner one; they are surrounded by reefs and have 17 fathoms between them.

Jurab and Ruckle Islands. North-easterly 3 and 4½ miles from Zoorbat Island are the islands Jurab and Ruckle, two low sandy spots, with reefs off them, extending 1 mile to the westward; and 1 mile S.W. of Jurab is a small rocky patch. To the N.W. of Ruckle, about 2½ and 3 miles, are the low sandy islands

Zudge and Zoha Islands. Zudge and Zoha, situated on an extensive bank of irregular soundings; 1 mile to the north of Zudge is a 2 fathoms patch, and 3½ miles in the same direction from it is an ex-

Shab Nusseeb. tensive 1 fathom bank. Shab Nusseeb is a shoal about 2 miles long, nearly dry in some parts, and has a small patch above water about 2 miles east off Jurab.

Baace Island. Baace is a small island situate on the south end of the innermost part of the Outer Reef, and has a patch of 1 fathom half-a-mile south of it, and also a patch 2 miles W.N.W. from it, on a point of the reef about 3 miles E. from Zudge; S.W. of the last-mentioned patch about ½ a mile is another, having a channel of 13 fathoms between them. Baace is about 5 miles off the coast reef, which is here the breadth of the Inner Channel, with a depth of 5 to 12 fathoms. From Baace the inner edge of the Outer Reef runs about 14 miles north a little westerly to a point on which there are 5 fathoms about 4½ miles off Ras Mussahrib; but the channel is only 2½ miles wide between it and the reef that extends about 2 miles off the Ras.

N.b.W. of Baace distant 6½ and 8½ miles are the islands Aboo Shedger and Gorab, and about 2 miles S.W. of the latter is Aboo Shad. Gutherban and Hawroof are two small islands lying a little to the north of Baace. All these are low sandy islands situated on the inner part of the Outer Reef, between which, and also to the northward of them, are many dangerous patches, rendering it unsafe to attempt to pass over the reef in this neighbourhood. Aboo Shedgar, Gorab, Gutherban, and Hawroof Islands.

Loban Island lies north at the distance of 10 miles from Kotama Island before described, in lat. 15°52′N., long. 42° 21′E. This island is composed of coral rock with a layer of soft earth and sand on the top; it is low and of inconsiderable dimensions, the water having made passages through the lowest part, and part of the sides are broken down. The reef upon which it is situated extends a quarter of a mile off the north end, and nearly 2 miles from the south end, with 18 fathoms close to. South of the island 4½ miles is the north end of a shoal with 8 fathoms on it, from whence it extends southward. There are 25 and 30 fathoms between. Loban Island.

Toag Island lies about N.¾E. distant 9½ from Gorab Island and 4 miles from the coast reef, with deep water all round it, and may be passed on either side; it is about 4 miles north of the north point of the reef before mentioned, 4½ miles to the westward of Ras Mussahrib. Toag Island.

About N.N.W. 4 miles from Toag is Ashig Island, with two others lying in the same direction at three-quarters and 2 miles from it. These islands are on a narrow bank which extends about 7 miles N.b W. of Ashig, and 1½ mile to the south of it, the north part having from 2 to 5 fathoms on it. Between this bank and the coast reef the channel is from 4 to 5 miles wide, with 8 to 10 or 12 fathoms in it, but, like Toag, it may be passed on either side. Ashig Island.

About N.b.W. 12 miles from the north end of the last-mentioned bank is the little island Dahret Jaffree with 10 Dahret Jaffree Island.

Jaffree and Gutheir Islands.

fathoms all round it, and 2 or 3 miles to the N.W. of it the islands Jaffree and Gutheir situate on a bank with 2 fathoms between them. These are also about 5 miles from the coast reef, and may be passed on either side, there being 10 fathoms within, and 25 to 30 on their outside.

The inner edge of the Outer Reef, from abreast of Ras Mussahrib, forms a bight with deep water to the S.W. and then extends north to lat. 16°23′N. It thence turns to the westward very irregularly 13 miles, and then to the southward in the same irregular manner to the parallel of 15°52′N. thence E. and N.E. to Baace Island, having several islands and patches on it, but no clear channel. Of these islands the

Omel Hammath Island.

first is Omel Hammath, at the distance of 5¼ miles W.b.S. of Toag, and about 1½ mile on the Outer Reef. It is a small coral island with another small island north of it, a patch

El Bother Rock.

1¼ mile to the east, and another to the N.E. El Bother is a high remarkable rock about 5 miles S.W. of Omel Hammath, with five small rocky islands from the north to west.

Tokaillah Islands.

Tokaillah Islands are two in number, which are also high and rocky, situated to the N.W. of El Bother; the smallest is distant 1 mile from it, is of triangular shape, nearly 1¼ mile long and three-quarters of a mile in the broadest part. The largest island is more of a horse-shoe shape, and upwards of 5 miles in circumference; it has a small village, a mosque, and some wells of brackish water. Gibel Jing and

Gibel Jing and Muffiagane Islands.

Muffiagane are two small, high, and rocky islands S.W. of Tokaillah Islands, situated on a bank of shallow water. The

Fusht Island.

Island of Fusht lies to the S.W. of these, in latitude 16°11′N. and longitude 42°25′E.: it is 2½ miles in length and 1 in breadth at the south end, and is of good height. There is a small fishing village with a mosque in the centre of it, and near the village are some wells of brackish water. On the south part of the island is a well of good water, but it is difficult to be obtained, the landing place being rocky.

About 7 miles W.S.W. of Fusht is Sana Island, situated on an extreme point of the reef, in lat. 16°7′N. long., 42° 19′E.; it is about 1½ mile in length N.W. and S.E., with two bights on its N.E. side. There are 3 fathoms close to its north end, and 53 fathoms very near to its west side. About 7½ miles E.S.E. from Sana, and 5½ miles S.S.E. from Fusht, is the Island Mugdgoor, also about 1½ mile in length, with 3 fathoms close to its N.E. side; and between these, but nearest to Fusht, are two small islands. Nearly 8 miles S.S.E.½E. from Sana in the parallel of 16° north latitude, and near the western edge of the reef, is the west end of a shallow bank of 1 to 3 fathoms, which extends about 3½ miles east. There are 4 fathoms close to the northward of it, 20 fathoms close to the westward, and about a mile further west, 55 fathoms. To the N.W. of Fusht are the Islands of Erthane, Zinier, Beree, and Rafer Beree, which are situated upon the centre of the banks, with very irregular soundings, and in some places only 2 fathoms. Erthane is long and narrow, and rather high, 4 miles west of Tokaillah. Zinier Island is of triangular shape, about 8 miles in circumference, and about 1 mile north of it is an island about 1 mile in extent. Between Zinier and Erthane is another small island. On the west side of Zinier is a small village and some brackish water. Antelopes are plentiful. The bank on which these four islands are situated is very shallow; there are from 3 to 15 fathoms between it and Tokaillah, 13 fathoms to the northward, 4 to the westward, and 58 fathoms close to the southward of it.

Sana Island.

Mugdgoor Island.

Erthane and Zinier Islands.

N.W.by W. distant 5 miles from Omel Hammath Island, is the Island Rockgadah, with two small islands south of it, one distant half a mile, the other 2 miles. West of Rockgadah, distant 3½ miles, is El Onserat Island,

Rockgadahand El Onserat Islands.

about 1½ mile in length, and of an extraordinary shape; and to the W.N.W. of it, upwards of a mile, is a sand-bank 1½ mile in length east and west: this is near the north part of the inner bank. A small island lies 2½ miles S.E. of El Onserat.

Sale Seeah Island.

Nearly north, 3½ miles from Rockgadah, is the Island Sale Seeah or Omel Hussel, a small low sandy island, surrounded by a reef, with from 2 to 9 fathoms on it, about 1¼ mile wide: it extends 2½ miles to the northward of the island and 1 mile to the south; and the whole is surrounded by a channel of deep water of from 25 to 12 fathoms.

Sale Rubbah Island.

Sale Rubbah Island lies 8½ miles W.by S. from Sale Seeah, and nearly 1½ mile north of the island before-mentioned, north of Zinder: it is about a mile in length east and west, and between it and the sand-bank is a gut of deep water on the outer bank, having from 27 to 35 fathoms' mud.

One-fathom patch.

North, distant 7 miles from Sale Seeah, is the south end of a one-fathom patch, which extends about 4 miles northward, about a mile wide, with 22 to 27 close to it.

Doduffer and Zoorat Islands.

Doduffer and the Zoorats are situated upon a bank of sand and coral soundings, shaped like a man's leg and foot, 3 miles to the westward of Sale Seeah Island. The depth between the two Zoorat Islands is from 2 to 4 fathoms, and to the northward of them, from 6 to 13 fathoms. Just outside the calf of the leg are three rocky patches, and between them and the reef north of Sale Seeah is also a rocky patch. There is a deep channel on either side of this leg-bank, and the western one is bounded by an extensive bank, which runs down towards Sale Rubbah, leaving a channel between its south point and that island leading to the westward.

To the westward of the reef on which Zinier Island is situated, about 1½ mile, is another reef, with 4 to 20 fathoms between. This reef is about 9 miles in length N.E. by N. and S.W.by S., somewhat in shape of a pear, having on it 3 islands and some rocks, with some very shoal water. The westernmost of the islands is Rafer Beree, about 2½ miles in length N.by E. and S.byW., of irregular shape, and about a mile broad. About 1½ mile east of it is Beree Island, of similar length and breadth, with a small island and some rocks betwen their south ends. At the N.E. end of the bank, and 3½ miles from Beree, is Maran Island, surrounded by a reef, and 20 fathoms to the southward of it. About 2 miles N.W.by N. from Maran is the Island Remain, also surrounded by a reef, with 8 fathoms between them. Remain is about 1½ mile in length and shaped like a hatchet with the haft to the N.W., the extremity of which is the highest part: the island is principally composed of sand. Five miles north of Remain is Simer Island, small, low, and sandy, with a reef on its north side; and 2 miles south of Simer is a rocky patch.

Rafer Beree and Beree Islands.

Maran and Remain Islands.

Simer Island.

Dahret Simer is a low sand and coral island, about a mile in length, surrounded by a reef, which extends 1½ mile S.E. from it, with 1 fathom on it. It is nearly S.E.by E., distant 2½ miles from Simer, and N.E.by N., 4½ miles from Remain Island, and is situated on the west edge of the bank before spoken of, whose south edge is within a mile of Sale Rubbah Island, from whence it extends 17 miles N. by E., and is 5 to 6 miles broad, but no passage across it to the southward of Muzzaguf Island, about to be described. N.by E.½E., 3½ miles from Dahret Simer, is a cluster of rocks about a mile in extent, with 7 to 10 fathoms on its south and west sides, and to the N.E. of which from 1 to 3 miles are 4 small islands, with a larger one to the eastward

Dahret Simer Island.

Muzzaguf Island.

of them, called Muzzaguf, about a mile in length and half a mile in breadth. To the westward of these islands is a channel in a N.N.E. direction, with 7 fathoms in it. Muzzaguf and the 4 small islands are situated on a shallow reef. N.N.E., 4 miles from Muzzaguf, is the south end of a shallow patch, extending northward more than a mile to near the end of the bank. The inner edge of this bank is 16 to 19 miles from the main, and there are from 13 to 30 fathoms near it.

Dahret Jaffree, Jaffree and Gutheir Islands.

About N.by W., distant 12 miles from the north end of the reef of Ashig Island, is the little Island Dahret Jaffree, and W.N.W. of it, 1 mile, is Jaffree Island; N.N.E. from which, 1 mile, is Gutheir. These three little islands are on the western side of the inner channel, distant 5 miles from the shore reef, having soundings of 12, 8, 4, and 2 fathoms between. The two latter are situated upon one bank, upwards of 2 miles north and south, and 1½ mile wide, with 2 to 3 fathoms between them. Dahret Jaffree is surrounded by a separate reef, and there are 10 fathoms between it and the others.

Amnah, Omel Curra, and Omel Currip Islands.

Eight miles N.W.¾W. from Gutheir is Amnah Island, with a small island to the southward of it, and a rock about a mile east of its north end. From 1 to 2 miles north of Amnah is a cluster of five islands, the north-westernmost called Omel Curra, and the north-easternmost Omel Currip: these 5 islands are situated upon a sand and coral bank, and there is a passage between them and the southern two, with 9 to 13 fathoms depth. N.28°W. of Omel Curra, upwards of a mile, there is a one-fathom patch; and there is a sunken patch at the same distance S.W. of the island. Two miles and a half east, northerly from the little island south of Amnah, is a patch of 5 fathoms.

Jeseerat Hubber.

N.N.W.½W., distant 3 miles from Omel Curra, is Jeseerat

Hubber Island, about half a mile square, and surrounded by a reef. The narrowest part of the inner channel between Omel Currip and the shore reef off Gheesan is 4 miles wide, with 9 to 14 fathoms, and between Jeseerat Hubber and a three-fathoms patch N.E. of it, it is 3½ miles wide. Jeseerat Hubber is about 7½ miles west of Gheesan.

Sale Shertef, Doraker, and Aboo Shoogar Islands.

About 5 miles west of Jeseerat Hubber is the east edge of a triangular-formed bank, about 6½ miles north and south, having 6 islands on it. On the south point is Sale Shertef, about half a mile long; and 1¼ mile N.E. of it is Doraker Island, with 30 fathoms near its S.E. side. Aboo Shoogar is near its N.E. end, and has 24 fathoms near its east side. This is a very small island, composed of madripore, cracked and broken into numerous pieces, forming deep clefts, through some of which the water passes, while others are filled with sand and earth, where some jungle trees have sprung up. The bank from thence extends about 5 miles westward, with 16 fathoms on its extremity, but on some parts it is very shallow. The other three islands lie to the N.N.W. of Sale Shertef. About 2 miles E.N.E. of Aboo Shoogar is a patch of 13 fathoms, and 30 fathoms to the eastward of it.

Shoorah Island and bank.

N.W.by N., distant 1·1 miles from Jeseerat Hubber and 2½ miles to the westward of Ras Toorfah, is Shoorah Island, which forms the extent of this part of the inner channel, with regular decreasing soundings from the island to the Ras, near which are 7 fathoms. Shoorah is a small and low island, situated upon the eastern end of a bank of rocks and sand, extending to W.N.W. nearly 7 miles, with soundings of 2 to 12 fathoms on it. This bank lies in a direction with Gorab Bank, and between them there is a channel of deep water 3 miles wide. Gorab Island lies W.N.W.½W. distant 13½ miles from

Gorab Bank and Island.

Shoorah, and near the west end of the bank just mentioned; it is rather high, and little more than half a mile in length, with a small black rock off its north end. Gorab Bank is about 5 miles long and 3 broad, with irregular soundings of 9 to 20 fathoms, on rocks and sand.

Theran Island.

Theran Island is 9½ miles N.N.W.½W. from Shoorah, at 7 miles off the coast, and is on the west side of the Inner Channel. The highest part forms a steep bluff to the westward, which is 60 feet above the level of the sea, and has 25 fathoms pretty close to it; a small bank extends off the north side of the island, with bad holding ground. This island lies E.N.E. 9½ miles from Gorab, and there is a good deep channel between it and Gorab Bank.

Farsan Islands.

The Farsan Islands are the largest all along this coast, and are situated upon the extensive banks west of Gheesan. They are two in number, but may be considered as forming one island, being connected by a sandy spit of shoal water, across which camels frequently pass from one to the other. On the east side of this spit is Core Hassieff, and on the west side, Core Buckarrah. They are of very irregular shape, and will be better understood by the chart than by any written description. The westernmost is Farsan Kebeer, 31 miles in length N.W.¾W., extending from lat. 16°35′N., long. 42°13′E. to lat. 16°54′N., long. 41°47′E. Farsan Seggeer is on its N.E. side, 18 miles in length, and extends to lat. 17°1′½N. Although their whole breadth is only 12 miles, they measure round their edges 130 miles. The S.E. point lies 26 miles S.W.½W. from Gheesan, and N.W.by N. 6½ miles from Simer Island, before described.

Description of marks, anchorages, and land of Farsan.

The land of Farsan is of considerable height, interspersed with some plains and valleys. The hilly parts are coral rock, the most remarkable of which is Jibbel Cassar, a

small round hill, east of Tibtah Bay; Jibbel Marabah, a table hummock, on an island near Farsan, about 5 miles N.E. of Tibtah Bay. Jibbel Munthak, 11 miles N.W. of the last-mentioned, is a high island, lying in an east and west direction, having on its north side the entrance to Core Suggeed. Jibbel Momed is a high hill, like a quoin, on the easternmost point of an island of that name, off the northern part of Farsan: Jibbel Deesan, a high hummock on the south part of an island of the same name, off the N.W. part of Farsan Kebeer, and forms the S.W. side of the entrance to Core Buckarrah. Jibbel Suffer is an elevated part of the island to the northward, with a tree on its top, and is to the south-westward of Sale Abado Island. Remarkable Bluff is of quoin-shape on some bearings, and from the southward appears like a hummock with a peak in the centre; it is situated on the western part of the south end of the island, on the east side of the eastern entrance to Goomah Bay; there are also three remarkable trees two miles south of Jibbel Cassar.

Jibbel Cassar, Jibbel Marabah, and Jibbel Munthak.

Jibbel Momed.

Jibbel Deesan.

Jibbel Suffer.

Remarkable Bluff.

About midway between the S.E. point of Farsan Kebeer and Marabah Island, and near to Farsan, is the island Gomarree, situated on the west side of a channel, through which vessels may pass from Gheesan to the south-westward, and contrary. Half a mile east of Gomarree is a two fathoms patch, and further eastward are three other patches in the entrance of the channel, which, throughout, is about 2 miles wide. The shoals are numerous in this neighbourhood and about Farsan Island, and the eye must be the principal guide to a vessel entering either way. The surveyors seldom had much difficulty in seeing the reefs.

Channel near the east end of Farsan Kebeer.

Vessels having occasion to enter this channel from the south-westward must avoid a bank that extends to the south of the S.E. point of Farsan Kebeer 2½ miles, which

from thence turns round to N.E., with 3 to 2 fathoms on it; and also of the little island Hindeah, to the east of this bank, and 3 miles S.E.by E.½E. from the S.E. point of Farsan. One mile S.by E. of Hindeah is a small island surrounded by a shoal, and S.E. of it 1 mile is a patch of 4 to 5 fathoms.

Coolam Island.

Due east from the S.E. point of Farsan, rather more than 3 miles, is the island Coolam, with several small islands and rocks to the south, west, and north, at 1½, 2, and 3 miles distance, on a bank that forms the east and south sides of the above channel. Off the bank, due west of the south end of Goolam, is a rocky patch in the channel, having 10 fathoms between it and the bank, and 15 fathoms on its western edge.

Haffer Island.

To the N.E. of Goomaree is Haffer, a small rocky island, and a cluster of small rocky islands on the edge of the rocky bank, which extends about 5 miles to the east of Farsan, and forms the north side of the channel eastward just mentioned. The northernmost of this cluster is called Aboo Shoory Island, and about half a mile to the N.E. of it is a bank of rocks and sand, with 3 to 15 fathoms on it; and between the south end of this bank and Aboo Shoory, there is no ground at 40 fathoms. The bank extends nearly 4 miles N.E., and is 1½ mile wide.

Aboo Shoory Island.

Jibbel Marabah Island.

Jibbel Marabah Island lies to the northward of Haffer, and near a projecting point of Farsan Kebeer; it is about half a mile long, composed of rocks, and is the highest island in this neighbourhood. It has a flat top or hummock of the barn shape, is surrounded by a group of small low islands, and appears from the northward as if part of Farsan Island.

Jibbel Abdoolad Island.

Jibbel Abdoolad is a small rocky island to the north of Marabah, and is also surrounded by a group of smaller

islands; it may easily be distinguished by a knob or remarkable bluff on its south end. This island and group are situated upon a bank off the Farsan coast, which extends from Marabah, and forms a tongue or point, 3 or 4 miles northward of Abdoolad Island, having between it and Farsan a bight of deep soundings.

Munthak Island, mentioned above, in lat. 16°49′N., is about 3 miles in length, east and west, and 1 mile broad at the east end, tapering to the west, where it is only half a mile broad; it is high, and composed of coral. To the south of Munthak is Core Hassieff, running about 8 miles into Farsan Kebeer; it has from 5 to 8 fathoms depth, but is narrow and full of shoal patches; there are also some rocky islands on the west side of it, and two small rocky islands 1½ mile east of Munthak Island, which forms the east side of the entrance. A dangerous rocky spit runs nearly 3 miles to the north of these islands, being the extremity of the reefs on the north part of Farsan Kebeer.

Munthak Island.

Core Hassief.

Core Suggeed is to the west of Munthak Island. This is an excellent harbour, of more than a mile extent, with 9 to 12 fathoms. Here is a small village and a grove of date-trees on its north side, in which are many wells of good water. The houses are small and built of coral, and are mostly in ruins; and there are no supplies to be obtained besides water. The anchorage is defended from all winds and sea; the entrance to it is a quarter of a mile broad, bounded on the south by Munthak Island, and on the north by five small islands, off the westernmost of which there is a rocky spit, extending to the S.W. half a mile into the bay, which must be avoided.

Core Suggeed.

There are some dangerous patches east, E.N.E. and N.E. of Munthak Island, distant from 3½ to 4 miles, forming a rocky spit. A line from Dthabuck Island to the highest

part of Munthak, or Munthak bearing S. 42° W. will clear them. The northernmost of the islands forming the entrance to Core Seggeer, bears S. 78° W. from the point of the spit. Having entered the bay and cleared the spit running off the westernmost island, steer up to the N.W., and anchor off the grove of trees, in 12 fathoms' mud.

Dthabuck Island.

N.E., distant 5 miles from the N.E. point of Munthak Island, is the island Dthabuck; and S.E., 1 mile from it, is a patch of 2 fathoms: W.S.W., 2½ and 3 miles from this island, are two rocky patches.

Sale Abado Island.

N.W. ¾ N. 7 miles from Dthabuck and S.S.W. from Gorab, distant 6 miles, is the little island Sale Abado. Dthabuck and Sale Abado are small coral rocks, of a round shape, and from 10 to 15 or 20 feet high, spreading out at the top with a sharp circumference, and falling in considerably towards the base. They are called by some Pie Islands. A bank extends from Farsan Seggeed to the eastward of Sale Abado, consisting of shoal water and groups of small rocky islands. Jeseerat Hackbane, the northernmost and largest of these islands, is 7 miles to the N.W. of Sale Abado, and 7½ miles west of Gorab Island. It forms a narrow stripe half a mile broad and 2 miles long, with two small islands off its north end. The bank extends 7 or 8 miles to the N.W. of it, with shallow irregular soundings. Between Jeseerat Hackbane and Gorab is a channel of deep water, 4 miles broad.

Jeseerat Hackbane Island.

Ras Russeeb.

Ras Russeeb, the north point of Farsan Seggeer, is in lat. 17° 1½′ N., long. 41° 53′ E. W.N.W. from Ras Russeeb, distant 4½ miles, is the east end of Jibbel Momed Island, which is 2 miles long and 1 mile broad; the eastern part forms a high quoin-shaped hill, the other parts low ground of sand and coral. The island is nearly surrounded by a gut of deep water, of 15 to 20 fathoms' mud. A bank runs

Jibbel Momed Island.

off its north end, with 3 to 8 fathoms on it, and at 3½ miles north of the eastern part of the island there is a patch of 2 fathoms.

Khynah Island.

Khynah Island is 5½ miles W.S.W.½W. of Jibbel Momed; it is a low triangular island of sand and coral, 1 mile broad, surrounded by five small islands, two of which are off its north end, and on the west a larger one; one on the S.W. and one on the S.E. They are all surrounded by a coral reef, which is connected with the bank that runs to the westward, from the north end of Farsan Seggeer.

Mutterhane and Dafiret Mutterhane Islands.

N.by W., 8 miles from Khynah, is the small rocky island Mutterhane; and N. and N.by W., 7 and 8 miles from Jibbel Momed, are four shallow rocky patches, with 11 and 18 fathoms near them. Between these patches and Mutterhane is a bank of irregular soundings, 3½ miles wide, stretching 3 or 4 miles northward, with 35 and 40 fathoms near its edges. W.N.W. ½ W., 5½ miles from Khynah, is a small rocky island, with a reef round it, called Dahret Mutterhane, and to the north of it, 2½ miles, is a rocky bank of 20 to 25 fathoms, and no bottom at 40 and 60 fathoms near it.

Jeseerat Deesan Island.

S.S.E., about 3 miles from Khynah, is the north point of Jeseerat Deesan Island, whose western edge extends 4½ miles southward; it is of triangular form, nearly 15 miles in circumference, and is generally flat near the sea, rising gradually towards the centre, having at its south part a remarkably high hill. The S.E. part of Jeseerat Deesan is connected, by a bank of shallow soundings, with the N.W. point of Farsan Kebeer, and there are two small rocky islands between them, and a larger on the S.E. part of Deesan, with a small boat's channel to the westward of it. The banks off the east side have some dangerous rocks, but the other sides have deep water. A small island lies off its north end, with deep water between them. On the south

side of the island are the remains of a village, consisting of about one hundred houses, built of rough stones without cement, and near it a cemetery, containing about one thousand Mussulman graves, and a tomb, enclosed by a wall. This place is said to have been inhabited fifty years ago. Neither wood nor water were found.

Triangular Island.

S.W., 3 miles from Ras Russeeb, and 4 miles S.S.E. from Jibbel Momed, is a triangular island, 5 or 6 miles in circumference, on the south edge of the bank that extends westward from Ras Russeeb to Khynah Island, having 16 fathoms to the southward of it; and about mid-way between this island and Jibbel Momed is an island, about a mile in length, and three small ones due west of it, all low coral islands. On the south edge of this bank, and 4 miles to the westward of the triangular island, is a patch of 1 fathom. It is about 2½ miles from the N.E. side of Jeseerat Deesan, and there is deep water close to the southward of it.

Five miles east of Ras Farsan Kebeer is the N.W. part of Farsan Seggeed, where there is a small village, called Keftib, on the highest part of the land. Between these is

Core Buckarrah.

the entrance to Core Buckarrah, formed by the Farsan Islands, and runs in to the S.E. about 14 miles. The outer entrance is between Khynah Island and Jeseerat Deesan. There are irregular soundings of 4 to 8 fathoms in the innermost half, and the outer part has deep water. It is not advisable for ships to run entirely up, as some parts of it are so narrow that they would have to warp a considerable way out against a north-westerly wind. The bank which connects Jeseerat Deesan with Ras Farsan extends 4 or 5 miles within the Ras, on the edge of which a ship may

Anchorage.

anchor in 16 to 18 or 20 fathoms, 1½ or 2 miles eastward of the Ras. At 2½ miles eastward of the Ras, and on the edge of the bank, is a small patch, with three feet water on it;

and about 4½ miles S.E. of the Ras, is the village of Sayel. There are two or three wells of very good water just within the narrowest part of the Core, close to the beach, on the western side. The N.W. part of Farsan Kebeer is high and rocky. Sayel village. Fresh water.

S.W.byS. distant 8 miles from Khynah, is the north end of Sarso Island, extending thence about 5 miles to the S.E.; and to the eastward, and parallel to it, another island, called Sindee Sarso; they are two narrow coral islands, about a ½ and ¼ of a mile broad, and both of considerable height, the outer one being 160 feet above the level of the sea, with sharp points of coral above the surface. The channel between them has from 14 to 20 fathoms in the middle, but is narrow and blocked up at the S.E. end by small islands and shoal water. It affords good protection from southerly winds, but it is not advisable to anchor in it with northerly winds, as there would be some difficulty in getting out. These islands are situated on the eastern verge of extensive shoal water, called Shaab Farsan, which extends about 10 miles to the westward, and 18 miles to the N.W. Sarso and Sindee Sarso Islands.

There is a small rocky islet close to the west of Sarso, about a mile from its N.W. point, which, from its singular appearance, is called Cape Island, or Button Rock, appearing like a button standing on its shank. Button Rock.

E.by S. about 6 miles from Sarso, is the island Umal Bisran, about 5 miles round, rather high, with a valley in the centre, into which the salt water flows; it abounds with wood, but there is no fresh water. It is about a mile distant from Farsan Kebeer, and N.W. of it, from 1½ to 2½ miles, is a bank with 1 to 2 fathoms water on it. Umal Bisran Island. Shoal Bank.

Nearly 3 miles south of Umal Bisran is the north part of Zelfeef Island, of about 7½ miles in length and 2 miles broad; the land is high, and a small cove runs up into the Zelfeef Island and Bank.

N.W. part of the island, from which fresh water may be procured, but with some difficulty; wood may also be cut here, and antelopes are to be found. Zelfeef is situated on the same bank with Umal Bisran and the shoal north of it, which bank extends to the S.E., and includes Doomsook and Goomah Islands, hereafter described. There is a deep channel between this bank and Farsan, from 3 to 4 miles wide, and also a deep channel between it and the outer bank or reef, called Shab Farsan. To the S.W. of Zelfeef, on the reef, is a chain of low sandy islands in a S.E. direction, with very shallow water about them.

Low sandy Islands.

S.E. from Zelfeef 1½ mile, and on the inner edge of the same bank, is the island Selwan, about 2 miles in length, high, and of coral formation, having shallow water on the S.W. and deep on the N.E. side. E. by S. 7½ miles from Selwan, is the island Goomah, having three high coral islands between, and on the same bank. Goomah Island is of circular shape and 9 miles round, with a deep gut or small core on its south side, and a rocky spit, extending nearly a mile off its north end, with 9 fathoms close to it, and less water towards the main. This island is at the end of the deep-water channel, is of considerable elevation on its south part, and has a remarkable sand-hill on its north end, to the eastward of which is a small fishing village; the inhabitants are in a wretched state. There are some wells of brackish water, but no cattle or other supplies. There is a very good bay on the north part of the island, called Core Goomah, affording protection from all winds. It is formed by a bight in the south part of Farsan Kebeer Island, is 7 miles in length, east and west, and at the narrowest part is 1½ mile broad, and the same distance from the north end of the rocky spit, on the north side of Goomah, and the main. The deepest water is on the N.E. side of Goomah, where in the

Selwan Island.

Goomah Island.

Core Goomah.

centre are 18 fathoms. The rocky spit bears from the sand-hill N.30°E. At the N.E. part of the bay is a well of fresh water, but it is very scarce. Farsan village is about 2 miles to the north of it. In this part of Core Goomah is Tibtah Bay; it is only a small merza for boats. Jibbel Cussar, bearing E.4°S., is the leading mark for the harbour. Supplies of any kind are not procurable here. Tibtah Bay.

Nearly 3 miles S.S.E. from Goomah is Doomsook Island, situated on the same shallow bank. This island is high, about 7 miles in circumference, with a core in it of 15 and 20 fathoms' mud, which nearly divides it in two: there is no fresh water, but plenty of antelopes. To the southward of Doomsook are two circular banks, in the centre of the deep channel: the least water found on them is 6 fathoms, sand and rocks. Doomsook Island.

Doharab is a low sandy island, about 2 miles in length, north and south, in lat. 16°18½′N., and long. 41°59′E., is surrounded by a reef nearly 2 miles wide, with 6 to 14 fathoms close to it. Five miles from its west side there are 25 fathoms, and 9 miles further west there is no bottom at 160 fathoms. The island is of triangular form, and has a small islet close to its N.E. side. Doharab Island.

Six miles N.W. by N. from Doharab, is another island of similar size, called Murrak, and 2 miles further, in the same direction, is the little island Dowassela, both situated on a reef, which extends 2 miles south and west of Murrak, and 1 mile to the east of it, including another little island north of Murrak. There is a channel between the reefs which surround this island and Doharab, 2½ miles wide, with 11 to 17 fathoms in it. Murrak and Dowassela Islands.

Murrak is about 6 miles within or N.E. of the depth of 24 fathoms, and 9 miles further S.W., there is no bottom at 160 fathoms. There appears to be no safe channel across

the Outer Reef between Dowassela and its N.W. extremity, in lat. 17°3½′ N., a distance of 16 leagues. There are several small islands and patches on it, now to be partially described. This part of the Outer Reef is called Shaab Farsan.

Omel Zahul and Mahamah Islands.

Four miles N.E. of Murrak, in a line between that island and Doomsook, are the two little islands, Omel Zahul and Mahamah, situated near the inner edge of the Outer Reef, about a mile apart, with 6 fathoms between them. To the W.S.W. of Zelfeef, about 7 miles, is another small island near the middle of the reef. There are also three small sandy islands lying to the S.W. of Sarso, one distant 3 miles, the other two 6 miles. The water is very shoal on Shaab Farsan, in their neighbourhood.

Dithahayer and Harneesh Islands.

Sale Macowa Island.

Six miles W. a little S. from the north end of Sarso, are Dithahayer and Harneesh Islands, close together, and both small and sandy. N.W. by N. from these, and 10 miles W.N.W. from the north end of Sarso, is Sale Macowa Island, surrounded by a shallow bank, and several rocks to the eastward of it. This is the northernmost island on Shaab Farsan, and from it to the extremity of the bank are numerous dangerous rocky patches.

The COAST OF ARABIA, *from* RAS TOORFAH *to* COOMFIDAH, *with the* OPPOSITE ISLANDS *and* SHOALS *upon the* INNER EDGE *of the* OUTER REEF, *forming the* INNER CHANNEL.

FROM RAS TOORFAH, the coast runs N.¼W. 27 miles to Shab el Aboo Looker, 7 miles to the south of which is Shab el Kebeer, a part of the coast reef, the centre of which projects 1½ mile from the shore, and gradually tapers away to the north and south. There are 4 fathoms close to the edge

of the reef. From Shab El Aboo Looker, the coast turns to N.W. 8 or 9 miles to Core El Etwid, which runs a short distance into the coast, and has 2½ and 2 fathoms on it. There is a long shoal off the entrance, with 3 fathoms inside, and there is a 1½ fathom patch of rocks 2 miles W. by N. of the entrance, and 1 mile off the coast, with 5 fathoms just outside it. The village of Etwid is 5 or 6 miles inland. Jibbel Etwid, a very remarkable peak on this part of the coast, is to the N.E. of Core El Etwid, and will easily be known, as it appears quite unconnected with the range of hills in the neighbourhood, and is much nearer to the coast. El Etwid. Jibbel Etwid.

Eight miles N.W. from El Etwid is Geeass, off which is a long reef about 1 mile from the coast, with 2 and 3 fathoms within it; and nearly 4 miles west of this place is a patch of rocks, with 4½ fathoms on it. About 9 miles further is El Majis, a Bedouin village, well peopled, off which the coast reef projects nearly ¾ of a mile, forming the little Core El Muckerah to the north. Between Geeass and El Majis, at 3½ and 6½ miles from the former, are Shookake and Cootoof El Mussaree. Geeass. El Majis. El Muckerah.

Widan is 12 miles N.W. of El Majis; at this place a narrow neck of land projects from the coast, forming a semicircular bay, three-quarters of a mile broad, affording good protection from southerly winds only; the depths within are 3 and 4 fathoms: seen from the westward, this point of land has the appearance of an island. There are no buildings nor fresh water, but cattle are plentiful. Widan anchorage.

There is a high hill close to the sea, on the northern part of Widan anchorage, called Jibbel Buggarah. Jibbel Ruckerbut Chuddore, is a high hill forming a cape to the southward of Widan anchorage. Jibbel Hooseniel Marjis is the southern extreme of the range of hills just described; its northern part is conical, with a fort on it. Jibbel Widan lies Jibbel Buggarah. Jibbel Ruckerbut Cheddore. Jibbel Hooseniel Marjis. Jibbel Widan.

east of Jibbel Buggarah; the centre or highest part forms a small peak.

Anchorages. From Theran Island to Widan, there is anchorage all along the coast, and the names of places are as already enumerated, and as given in the chart; there are said to be many small villages along this part of the coast a few miles inland.

Kotumble Island. W.N.W. 5 miles from Widan is Kotumble Island, situated about 2 miles from the main. It is about half a mile in length, and forms a rugged peak, like a quoin, four or five hundred feet high, with a steep ascent on its north side, the only part accessible. The top of it is only a few yards in length, and very narrow, forming a perpendicular declivity to the south and west: on the east it forms a steep slope. The character of the rocks found on the island is volcanic; but there is no volcano now, nor is there any appearance of any eruption having taken place for many years. There are 12 fathoms between Kotumble and the main. About 3 miles S.byE. from Kotumble, and 3½ miles westerly from Widan, is a patch, with 30 fathoms to the northward of it.

Cussar. Cussar is a small Bedouwin village, 7 miles N.41°W. from Widan point, and north 3 miles of Kotumble; here are the ruins of a brick-built fort, but no supplies can be procured. At 4 and 7 miles N.W. from Cussar lie the south and north roadsteads of El Wussim, both affording good anchorage and protection, but it would be difficult to get out from the former in southerly winds. The latter has a bar of sand across the entrance, which connects the shore reef to the shoal on the north part of the entrance. The least water found on the bar is 2½ fathoms; within it the arere 6 and 7 fathoms mud. The remarkable hummocks between these anchorages will direct to either of them: these are three steep and lofty hills,

El Wussim South anchorage.

El Wussim North Anchorage.

in one when bearing east, the anchorage lying to the south and north of them. The outer or westernmost hill is called Wussim; the inner one the third hummock, and the centre one the fourth.

N. 17°W., distant 5 miles from El Wussim north, and close to the shore, is Aboo Lelf Island; and 3 miles N.W. ½W. from it, another island, called Assore, about a mile from the coast: the former, a small quoin, separated from the shore by a narrow shallow channel; the latter, a low wooded island, and both surrounded with reefs forming good anchorages. The reef extends westward 2 miles from Aboo Lelf, from whence it bends to the S.E., forming an inlet 1½ mile deep to N.N.W. opposite Dahban, in which it is not advisable to anchor with southerly winds. Aboo Lelf and Assore Islands. Dahban.

The reefs about Assore Island, and to the northward of it, extend about 3 miles from the coast, and form inlets to the south and north of that island, with good anchorages, which will be better understood by looking at the chart than by any description that can be given. The same may be said of El Burk, about 4 miles to the north of Assore Island. This Core, or inlet, runs into the land to the north, and the west side of the entrance is partly formed by the coast-reef, extending southward from a projecting part of the coast. Here a vessel may find good shelter from all winds. In the entrance is a shoal patch, the least water found on which is 4 fathoms; within are 5 fathoms mud. There are some wells of good water near the shore, where are some date trees; and there are the remains of a strong-built wall of unhewn stone, but no houses. The Shifting Peak, bearing N.86°E., leads to the entrance of this Core. El Burk. Good anchorage.

NAHOOD is a good Core, 3 miles to the north of El Burk; at its entrance Jibbel Tuse Sharm bears N.65°E. Nahood.

In the neighbourhood of Merser Nahood and El Burk, the range of hills converges towards the coast, the tops resembling

Jibbel Tuse Sharm. Jibbel Tuse Yemmenere.

the roof of a barn. Amongst these there are two larger than the rest, called by the natives Jibbel Tuse Sharm and Jibbel Tuse Yemmenere, or the woman's breasts. From El Burk they appear in the northernmost part of the range of hills, and then will be better known by having to the southward a detached piece of land, shewing more like a barn than either of them.

Shifting Peak.

Shifting Peak is in the second highest range of mountains to the westward of Napood hills, and is very conspicuous when seen from the northward.

Opposite Nahood the Inner Channel is 1½ mile wide between the coast reef and a bank which extends eastward from Jeseeral Mogid, hereafter described. About 11 miles further northward is Ernege, a small Core formed in the coast reef, with 6 or 8 fathoms water. Here are no houses nor huts to be seen, nor can fresh water be procured.

Ernege.

Ome Kergane.

Between Nahood and Ernege is a bank lying parallel to the coast, called Omé Kergane, forming the west side of the Inner Channel, which is little more than a mile wide. The north end of this rocky bank is 3 miles south of Ernege; it thence extends 6 miles southward, and is 1½ to 2 miles wide. Its north part is rocky, shallow, and uneven; in the south part the water is somewhat deeper. Within this bank there is no coast reef, and the mid-channel depth is about 20 fathoms, but there are two shallow patches at the north end of it.

Jafofe.

Four miles to the northward of Ernege is Jafofe, the coast between forming a point, from which a reef extends southward 2 miles, with 2 fathoms on it, within which are 9 to 6 fathoms in Ernege anchorage. Between this reef and Ome Kergane is a patch, with 2½ fathoms on it.

Good anchorage.

From the last-mentioned point of land to Halli point it is 7½ miles N.W., the coast between forming a bay, with good anchorage in 5, 7, and 8 fathoms, well sheltered from

N. and E. winds, but the coast is bordered with a reef. On the east side of the bay, besides Jafofe before mentioned, is Bojamar, nearly east from the point; there is neither house nor hut at either of these places. Bojamar.

The Point of Halli is bordered with an extensive reef, and some patches; the anchorage off this point, in 6 or 7 fathoms, is rather exposed. There are no houses to be seen, but a town or village is said to be not far inland. Halli Point.

N.W by N., 8 miles from Halli Point, is a projecting point of land, called Ras el Aboo Kalbe; the reef, about mid-way between, extending 2 miles from shore, with 4 fathoms close to it. Five miles to the northward of the point is Serome, and 4 miles further is Undareh, off which Jibbel Halli bears N.38°E. Serome has a small anchorage for boats. Ras el Aboo Kalbe. Serome.

The anchorage at Undareh is formed by a shoal of the same name, the south part of which has patches that are dangerous. The safest channel, in or out, is to the northward of the reef; and if going out through the south entrance, run 3 or 4 miles to the southward of the anchorage before hauling to the westward. The depth at the anchorage is about 7 fathoms. Upwards of 3 miles N.W. is Ras Abboo Mutnah. Undareh. Ras Abboo Mutnah.

MERCASSER is about 4 miles N. by W. from Ras Abboo Mutnah, and nearly 11 miles S.18°E. of Coomfidah. This place has good protection from southerly winds, but there are some small patches in the entrance to the anchorage. The place will be known by the Moolgamarree Islands, which are in its neighbourhood, and have anchorage all round them. Six miles N.N.W. of them is Ummusseefah Island; they are all low sandy islands, covered with bushes, and there are some rocky patches in their neighbourhood, easy to be discerned. The best channel is between the Mercasser. Moolgamarree and Ummusseefah Islands.

islands and the main: or you may pass between the islands, avoiding the rocky shoals south of them, and a rocky patch off the northernmost one.

Coomfidah. COOMFIDAH is a small town, surrounded by a wall, and is under the Turkish government: it has two forts towards the sea, and to the southward, without the walls, is a mosque, with a minaret. It has a small bazaar, which affords sufficient for the consumption of the place; but by waiting a few days, supplies of cattle may be obtained from the interior. The best water on the coast is to be had here, and as quickly as the ships' boats can carry it off: it is brought down in mussucks, on camels, alongside the boats, and the casks filled. In July and August, good grapes are also to be had.

Anchorage. The anchorage is formed by a low bushy island, off the port, which is surrounded by a reef, easy to be seen, and may be approached close in luffing up to fetch the anchorage. There is a small shoal to the north of the island, and the best channel is between it and the island reef, where there are 7 and 8 fathoms. There is a narrow channel, of 5 or 6 fathoms, to the eastward of the island, used by boats: it is formed by the island reef and a rocky spit off the town. There is also a shallow channel of about 2 fathoms to the north of the small shoal in the entrance, but is rocky, and not to be recommended. There is good, well-sheltered anchorage in 2¾ fathoms, mud, with the north fort bearing E. 25° N. and the south fort E. 15° S. The remarkable mountain, Gose Abool Ire, bears E. 7° 30′ N. from this anchorage.

Jibbel Halli. Jibbel Halli mountain is to the S.E. of Coomfidah, in the nearest range of hills: it is a very remarkable, pyramidal piece of land, when seen from that place and to the

north of it; but in proceeding southward it quickly alters, and at Undareh it appears an oblong hill, with its northern part rounded off abruptly.

Having completed the description of the coast, from Ras Toorfah as far as Coomfidah, we shall return to the southward, and commence a description of the islands, rocks, and shoals, on and near the inner edge of the outer reef, which may be considered as forming the western side of the Inner Channel.

Patches N.W. of Theran.

The first is a patch of 2 fathoms, lying N. 42° W. 7¼ miles from Theran Island and 11 miles from shore; 18 fathoms are close within it. West about 2 miles from this patch is another, a rocky patch, of 2 to 4 fathoms, with 30 fathoms between them; and about 2 miles farther N.W. a rocky patch, 2½ miles over, with 3 or 4 fathoms on it, and 18 close to the westward of it. W.N.W. 22 miles from Theran Island is the south end of Mummarle Seggeer, a narrow coral reef, over which the sea breaks in some parts, extending about 10 miles N.N.W., with a rock about 15 or 20 feet above water at the north end, called Mutbarhane. E. 14° S. 13 miles from Mutbarhane is a 3 fathoms' patch, with 33 and 36 fathoms close to it; this is 13 miles from shore. One mile south of Mummarle Seggeer is a rocky patch, with 47 fathoms between, and from 3½ to 5 miles east of its south end are three rocky patches. Five miles N. by E. from Mutbarhane is the east end of Mummarle Kebeer, extending W. by N. 9 miles, of a triangular form, being 5 miles wide at the west end, in a N.E. direction; it is full of patches, with deep water between them. This shoal lies 13 miles from shore, southwestward of Muckerah.

Mummarle Seggeer.

Mutbarhane.

Mummarle Kebeer.

S. 18° W. 10 miles from Kotumble Island, and the same distance from Widan (the nearest shore), is a rocky

reef, about 1½ mile long; and to the S.E. of it, 1 mile, a rocky patch, with 19 fathoms between them: there is no ground at 30 fathoms at 1 mile within. To the southward of the latter, 2 miles, is a 4 fathoms' patch.

Simmer Island. Simmer Island, in latitude 17° 47′ 30″ N., longitude 41° 28′ E., lies W. by S. distant 19 miles from Widan. This island is 1½ mile in length, east and west, and half a mile wide: it is very low, composed of coral and sand, and principally covered with decayed wood. The soundings are deep around it; and if anchorage is required, it may be conveniently obtained either upon, or on the western edge of, the shoal to the N. and N.E. of it. There are two small rocky patches 3½ miles S.E. of the island. There is a shoal to the N. and N.E. of Simmer Island, 5 miles in length and nearly 3 miles broad: the soundings obtained on it are from 3 to 19 fathoms; but there may be spots with less. On its western edge are 13 fathoms, mud, gradually increasing to the N.W. This shoal commences about 1½ mile N.E. of the island, and there is no bottom at 50 fathoms midway between them. N.E. 6 miles from the island, is a rocky patch.

Jeseeral Mogid Island. Jeseeral Mogid, in latitude 18° 13′ 30″ N., longitude 41° 24′ E., is a low, sandy island, with a large reef round it, which is connected to a bank of rocks and sand that forms the inner channel, and before spoken of. Ten miles S.E. by S. from Mogid is a rocky patch, on the south end of the aforesaid bank; and about ¾ mile S.E. from it is a patch of 7 fathoms, at the distance of 4 miles from the coast reef, having 30 fathoms and upwards between. From the rocky patch, the east edge of the bank extends north 12 miles, narrowing the inner channel from 4 to 1½ miles opposite Nahood, where the bank terminates. The south end of the bank is narrow; but opposite Mogid its breadth

increases suddenly, the eastern edge extending nearly 6 miles from that island. The depths on it are various and irregular, from 2 to 30 fathoms, the former being found 3½ miles E.N.E. from the island; and there are 4 fathoms 2 miles north of the rocky patch, with 26 fathoms between.

West of the south end of this bank, about 2½ miles, is a rocky bank, 3 miles long, with 4 to 13 fathoms on it.

About 2 miles north of Jeseeral Mogid bank is the south end of Ome Kergane bank, already described.

North of Jeseeral Mogid, 7 miles, and nearly 4 miles west of Ome Kergane bank, is the S.E. end of a half-moon-shaped rocky bank, on which the Hadarah Islands are situated, and which extends from thence N.W. and N. about 7 miles. The Hadarah Islands are low and sandy, and covered with bushes, giving name to the bank on which they are situated. Gad Hadarah is a low, sandy island, with an extensive reef lying N.W. and S.E., having a channel between it and the north end of Hadarah bank, with 14 to 23 fathoms water. Nearly 3 miles east of Gad Hadarah is a similar island, on a reef that extends N.W. from it a short distance. Nearly 2 miles E.S.E. from this island is a patch of 2 fathoms, and ½ mile S. by W., another of 1 and 3 fathoms, with a channel of 17 fathoms between; and 2 miles east of the S.E. of Hadarah Island, is a patch of 1 fathom.

Hadarah Bank and Islands.

Gad Hadarah Island.

Ul Gereef is an extensive rocky bank, full of dangerous patches, upwards of 8 miles in length, north and south, and 4 miles in breadth; it lies 5 or 6 miles S.W. of the Hadarah bank and 8 miles to the W.N.W. of Jeseeral Mogid.

Ul Gereef Bank.

Jeserat Gootna lies about 9 miles W.N.W. from the Hadarah Islands: its south point is in latitude 18° 27½′ N., from whence it extends nearly 5 miles north, and is nearly 2 miles wide in the broadest part. It is a low coral island, with bushes, and is surrounded by a reef which extends

Jeserat Gootna Island.

off nearly 3 miles to the S.E., with some large rocks above water, like small islands. The soundings to the eastward of it are 30 and 35 fathoms, mud, decreasing gradually to the coast. The other sides have deep water.

Jibbel Sabyar Island.

Jibbel Sabyar is 2 miles north of Jeserat Gootna, and is about 2 miles square and 60 feet high, sloping a little at the top, towards its rugged sides. On its western side is a village of fishermen's huts.

Ferandeer Islands.

N.byW. ½ W. nearly 5 miles from Jibbel Sabyar, are the Ferandeer Islands, which are two small oblong, irregular, table-topped, black rocks, about 40 feet high, situated upon the outer reefs; and N.N.W., about 5 miles from these rocks, is the low sandy island Dubarah.

Dubarah Island.

Between the Ferandeer Islands and Jibbel Sabyar, between Jibbel Sabyar and Jeserat Gootna, and between the latter and ul Gereef bank, there are said to be intricate channels, leading to the west and south-west to sea, passing between sand-banks and dangerous patches of sunken rocks; but the pilot refused to take the surveying ship. By a single glance at the chart, it will be readily seen that there is not any safe or proper channel that ships could attempt.

Rocky Shoals.

Due east from Ferandeer, about 6 miles, or nearly in mid-channel, is the south end of some rocky shoals, which extend to the northward about 4 miles, the north part being about 3 miles off the coast: they are in broken ridges, having some parts above water; and to the west of these, 2 and 3 miles, are three rocky patches. Three or four miles to the S.W. of Undareh are some dry reefs, to the N.E. of which is Undareh reef, which shelters the anchorage.

Undareh Reef.

The Moolgamaree and Ummusseefah Islands, and neighbouring patches, have been before mentioned: all these patches are easily discerned. N.E., 2 miles from Ummusseefah Island, is a rocky patch, with 15 fathoms between;

and from 1 to 3 miles west, and W. by S. from Coomfidah Island, are three rocky patches. There are also several patches and low islands extending 4 miles to the south of Coomfidah: some of these are about a mile from shore, with from 6 to 12 fathoms between them and the coast reef.

The Coast *of the* Hedjaz *from* Coomfidah *to* Leet, *with the* Islands *and* Shoals *on the* Inner Edge *of the* Outer Reef, *forming the* Inner Channel.

From Coomfidah the coast runs north and north-westerly to Ras Mutweer, a distance of 13 miles N.N.W., having several rocky patches and low islands between, at 1 to 2 miles from the coast. At 9 to 12 miles from Coomfidah are some patches in mid-channel, and to the westward of it. S.W. about 1½ mile from Ras Mutweer is the north end of a reef, which extends 2½ miles S.S.E., having two small islands upon it; and the coast reef runs off west 2 miles from the Ras, forming a point with 6 fathoms at its extremity, whence it runs north and joins the coast. Between this and the reef last mentioned is a channel, a mile wide, with 5 and 6 fathoms on it; the channel to the westward of the reef, between it and the Farrar Islands, is 4 miles wide, with 12 fathoms on it, and at Coomfidah it is 8 miles wide, with 18 to 20 fathoms. Ras Mutweer.

The south end of the Farrar Islands is in latitude 19° 17′ N. distant 5½ miles from the coast; they thence extend 13 miles in a N.N.W. direction, and are all low sandy islands, with a few bushes, situated in the eastern edge of the outer reefs, and form the western boundary of the Inner Channel. To the southward of these islands the edge of the reef is marked by rocks and rocky patches, with 18 to 20 fathoms close to it. The Cuffeel Islands are next to the Farrar's, Farrar Islands. Cuffeel Islands.

and are of a similar description, and similarly situated on the inner edge of the bank; they form a segment of a circle from W.N.W. to N. by W., 9 miles.

Ras Mahasin. From Ras Mutweer to Ras Mahasin it is 21 miles N.W. by N.; this is a long point or tongue of land running out to N.W., and is 5 miles N.E. by N. from the north extreme of the Cuffeel Islands. The coast between these places runs north and N.W. from Ras Mutweer about 11 miles to Dogar. At this place there is good anchorage in 5 fathoms to the eastward of a small patch which forms the roadstead. Here are a few huts, and the inhabitants are civil, but no fresh water to be obtained. Two reefs lie to the west and south of Dogar, extending about 5 miles S.S.E. with some small islands on them; they are from 1 to 2 miles off shore, and there are 6 and 7 fathoms between them and the coast reef. Some patches lie N.N.W. of them, and from these others extend westward, with 6 to 8 fathoms between them to near mid-channel, where there are two small islands, with 12 fathoms close to the S.W. of them; these are about 2 miles S.W. of Ras Zoogabe. There is a reef to the north of these islands. N. by W. 2½ miles from them, and S. by E. 2½ miles from Ras Mahasin, is a small island with a reef running west 1 mile from it. The channel is to the westward of all these islands and reefs, is nearly 4 miles wide, and has from 12 to 9 and 17 fathoms on it.

Dogar. Anchorage.

Ras Zoogabe.

Ras Mahasin.

El Hummar. It is 7 miles from Ras Mahasin to that of El Hummar, a tongue of land running southward, and with the former forms a bight or bay in the coast, bordered throughout with a reef. In the mouth of this bay is an island, about 3 miles long north and south; and reefs and patches, with channels between them, extending from its north end to the north point of the bay. There are also reefs and patches

on the east side of the island in the bay; and off its south end and west side there are numerous reefs and rocky patches, with deep-water channels between, extending across the channel to Serrane Island, a distance of 5 miles.

Serrane Island is high with an irregular top, about 7 miles long and 1 broad; it is surrounded by a broad reef of madrepores, and some patches on the S.E. part, which forms the inner boundary of the outer reefs. It consists of madrepores and sand, and is not inhabited, there being neither water nor wood. There are some patches to the S.E. of it on the edge of the reef, which here bends to the south, and joins the Cuffeel Islands. Serrane Island.

There are 19 fathoms close to the N.E. of Serrane, and S.E. of it is a patch close to the reef, between which and another to the N.E. of it about a mile (of those before spoken of) is the best channel.

From the east end of Serrane, the edge of the reef, studded with patches and rocks, runs N.N.W. about 10 miles to the S.E. end of Jennarbet Island, about 2 miles in length, very narrow, and surrounded by a reef; a similar island, about half its length, lies to the N.E. of it, also surrounded by a reef, both low and bushy. Jennarbet Island.

N.W.$\frac{1}{2}$N., 8 miles from Ras el Hummar, is Ras el Askar, and 5$\frac{1}{2}$ miles further on the same bearing is Gillargin, the coast being bordered with a coral reef throughout the whole extent. About W.N.W. 2 miles from Ras el Hummar, and about mid-channel, is a small island, surrounded with a shoal, with 15 fathoms on its S.W. side; and a patch about a mile to the westward of it. About $\frac{3}{4}$ and 1$\frac{1}{2}$ mile N. by W. from this small island are two others, of a similar description; and between the northernmost and the small island N.E. of Jennarbet is a small island, also sur-

rounded with a reef, having a channel between, with 15 fathoms on it.

Off the N.E. side of the small island eastward of Jennarbet are two small islands, with reefs round them. The outer reef hereabout approaches nearer to the coast than it does farther southward. An extensive reef between forms two channels; that nearest the coast, the narrowest, being in one part, opposite Ras el Askar, only 400 yards broad, with a depth of 5 fathoms. Ras el Askar may be known by having trees on its points, there being no others on the shore near it.

Ras el Askar.

Inner and Outer Channels.

This Inner Channel is considered the safest, as the shoals can be much better seen than in the outer one, although the outer one is almost always used when the wind is to the westward, as by going through the inner one, they would, in all probability, have to tack to clear the coast, and regain the centre of the channel.

In going through either of these channels it requires a good look-out, and coming from the southward, the extensive reef in patches that separates the channels will be seen, and the sand-bank on the south part of it; these will be a good guide to judge your distance from the patches forming the west side of the Outer Channel, on which the least water found was 3 fathoms.

Directions for the Inner Channel.

If going through the Inner Channel, pass in between the sand-bank just mentioned and an island S.E. of it, taking care to avoid a shoal of 2 fathoms in this channel about half a mile off the island, with 13 fathoms close to it; or pass inside the island, keeping a good-look out for the patches off them, where the least water found was 3 fathoms.

The clusters of patches forming the two channels of Ras

el Askar have deep water between, and on many of them there are 2, 3, and 4 fathoms.

GILLARGIN has good anchorage in 10, 9, or 8 fathoms, mud: going in from the N.W., after passing Shab el Muthar, hereafter mentioned, steer for the point of the reef off the entrance, and leave all the sunken patches that are visible on the left hand in passing them. At this place there is neither house nor hut. Gillargin.

RAKER lies N.W. ½ N. about 8½ miles from the point of Gillargin, the coast between forming a bight, bordered with a coral reef, in which are several patches of 3 and 4 fathoms, with 20 and 24 fathoms between them. Raker will be known by the high sand-hills close to the beach to the eastward of it: it has good anchorage formed in a bight of the coast reef, in 4 fathoms, mud, well protected. The reef here extends nearly 2 miles from the coast, and there are some rocky patches off the entrance, and also an extensive shoal in patches from S. by E. to S.W. of it, called Shab Multhar, nearly a mile off the coast reef; and there are other patches S. and S.E. of it. Raker. Shab Multhar.

It is 13 miles N.W. by W. and N.W. by N. from Raker to Leet, and for more than half the distance the coast reef extends more than 2 miles off, after which its breadth decreases to about half a mile, with some patches off it, and 6 to 10 fathoms at a short distance from it. The anchorages of Leet are formed and sheltered by patches, the largest of which is full 3 miles to the south-westward. A vessel going to Raker, and being just outside this patch, should first steer out about S. 40° E. for 7 miles, taking care not to get into less than 14 fathoms, to avoid the extensive patches off the shore reef; and when to the south of these, a S. 80° E. course for 5 or 6 miles will carry her to

the entrance of Raker; but the soundings are very irregular, from 12 to 5 fathoms, rocks.

Anchorages at Leet.

LEET.—The inner anchorage is small, but is well protected by the two reefs off it, between which is the best entrance; the depths are from 4 to 6 fathoms, mud. In leaving this place, if going to the southward of the eastern patch, it will be necessary to luff close round its point to the south-westward, to avoid many dangerous patches off the shore reef. The best anchorage in the outer road is to the S.S.W. of Aga Island, where there is 10, 12, and 14 fathoms water, mud. About 1½ mile to the S.W. of Leet is an extensive reef of innumerable patches, with a channel on either side of it. Aga Island is to the west of Leet anchorage, and is a small sandy island. The town of Leet consists chiefly of huts with a few mud buildings, and is situated to the S.E. of the inner anchorage, about 1 mile from the beach. Fresh water can be procured at that distance, but other supplies are very scarce.

Aga Island.

Leet Town.

DESCRIPTION *of the interior land between Leet and Coomfidah.*—Jibbel Doger is a most remarkable piece of land, on the highest range of mountains to the northward of Coomfidah: in that direction it runs off to a peak, but its north extremity forms more like a quoin, the thickest part of which is to the north. Jibbel Shager, or south peak, is a remarkable piece of land, on the second range to the N.W. of Jibbel Dogar. Gose Aboole Ire is in the highest range of mountains to the eastward of Coomfidah; its northern brow forms a high mound until well to the southward, where it becomes rugged: its south brow has a small but conspicuous peak. This mountain may be seen to the northward of Ras el Askar.

Jibbel Doger.

Jibbel Shager.

Gose Aboole Ire.

Having completed the description of the coast and reefs

as far as Leet, we will return to Jennarbet Island, and continue the inner edge of the outer reef. From Jennarbet the reef runs in a curve to N.W. and N. about 6 miles, and there forms a large round reef, with two patches on it, bearing N.W. by N. from the east end of that island. It there forms the N.W. end of the west channel off Ras el Askar, having in it 12 fathoms. From this part the reef turns away N.W. by W. 6 or 7 miles, having rocky patches close to its edge, and from thence W.N.W. and W.N.W.½W. to its north extremity, where there is a rocky patch 10 miles S.W. by W. from Aga Island. All along this space there are many rocky patches, and deep water on the edge of the reef, but no passage through to sea-ward. About 3 miles within the edge of the reef is Aboolaad Island, in latitude 19° 58′ N. nearly 12 miles S.S.W.½W. from Leet anchorage.

From Jennarbet north westward.

Jibbel Aboolaad, or Aboolaad Island, is 2½ miles long, in a N. W. and S.E. direction, three quarters of a mile broad, and 250 to 300 feet high, and surrounded by a sandy plain. It is quite barren, and destitute of water: branches of coral are observable sticking out of its highest parts. There is a small port for fishing boats on the west side; and beyond it, breaking reefs in that direction as far as can be seen from the top of the island. There are also several rocky patches near the edge of the reef to the northward of the island.

Aboolaad Island.

Having completed the Inner Channel, so far as Leet and the N.W. end of the Outer Reef, we will return to the southward and commence with the Patches, Shabs, and Islands, on and near the outer edge of the outer reef, observing that the Chart must be the principal guide as to their position, as many of them are without names.

Various nameless Rocky Shoals and Patches.

Thirteen miles west from Mummarle Segger, heretofore described, and N. 10° E. 9 miles from Mutterhane rocks is a shoal patch, with 90 fathoms close to its west side. N.N.E. 2½ miles from this patch is the south end of a long shoal with 5 and 4 fathoms, extending 8 miles north, 1½ mile wide, with 12 to 5 fathoms on its north end, which is about 9 miles west of Mutbarhane. About 2 miles S.E. of this is another long shoal. There are 5 patches, of 3 to 5 fathoms, lying from 7 to 15 miles to the northward of the extremity of the dangerous patches on the N.W. part of Shab Farsan. S.E.½S. to S.¾E. of Simmer Island, from 9 to 15 miles, are several rocky patches with deep water near them; and about S.W.½S. from the same island, 24 to 26 miles, is a cluster of rocky patches, and some with 2 and 3 fathoms on them; and to the westward of these, from 3 to 7 miles, are others, with 3 to 4 fathoms on them. S.W., 22 miles from Simmer Island, are two rocky patches, with no bottom, at 25 fathoms between them; and 130 fathoms, mud, at 2 miles to the N.E. On the same bearing, 14 miles from Simmer Island, is another patch; and other clusters lie S.W. by W. and W.S.W., at 10 to 15 miles from the same island. S. 76° W. distant 27 miles from Simmer Island, is the southernmost of the Wussaleat Islands, in latitude 17° 40′ N., and long. 41° 0′ E., the other lies north 2 miles from it, both low and sandy, with the remains of an old hut on one of them: they are situated upon a sand and coral bank 4 miles in length, and nearly 2 in breadth. These are the first islands met with near the outer edge of the reef, to the northward of Shab Farsan. S.W. 5½ miles from the south island, is a rocky patch, called Shab El Jurmah, and 3 miles S. by E. of the island is a 2-fathoms patch, with 28 fathoms between. Shab El

Wussaleat Islands.

Shab el Jurmah.

Jurmah is within 5 miles of the edge of the reef. West 5 miles from the north Wussaleat Island, is a dangerous rocky patch.

W. by N. 14 miles from Simmer Island, is Dahret Simmer Island, surrounded by a reef, with 7 fathoms close to the north of it. At 2½ miles S.W. is a rocky shoal 2 miles long, with 1 fathom on it, and 20 fathoms close to its north end; and W. by N. 1½ mile is a similar shoal of 1 fathom. S. 64° W. 9 miles from Dahret Simmer is a rocky shoal, also one 1½ mile N. of the island, and 4 miles N. by E. is another, having a channel between, with 18 to 25 fathoms. At 10 miles N.E. by N. from the same island is a rocky shoal, with 6 fathoms on its south end; and 4½ miles N.W.½W. from the island is a large rocky shoal, which has 2 fathoms on it and no bottom, with 105 fathoms of line close to its east side; N. by E. from it, about 2 miles, is another shoal about 2 miles long N.N.W.; between these there are 42 fathoms, and W. by N. from the latter 1½ mile is a rocky patch, with 38 fathoms between them: W. by N. ½ N. 3½ miles farther is a cluster of rocks, with 115 and 118 fathoms to the west, and 30 and 40 fathoms to the east, of them. The 118 fathoms just mentioned is close to the eastward of an extensive shoal of sharp pointed rocks, with deep water between them, and no bottom, at 50 fathoms close to the west side. Dahret Simmer Island.

From Dahret Simmer to the easternmost of two small sandy Islands, called Dahrat Meray, it is N.W. by N. 13 miles; this is surrounded by a reef, the other is 2 miles further west, and there is a rocky patch between them. There are also patches of rocks to the southward of both, and 4 miles S.W. of the westernmost is the shoal of sharp pointed rocks just spoken of. E by N. ½ N. 6 miles from the eastern Dahrat Meray, and S.W.¼W. 14 miles from Jeseeral Mogid, is a rocky shoal about 3 miles long in the latter Dahrat Meray Island.

direction, with 6 to 14 fathoms on its west end; and N.E. and S.W. of it distant 3 miles each way, are two rocky patches with 28 fathoms between, and no bottom at 50 fathoms to the north of the north-westernmost.

Zuggak and Dahrat Aboo, Mussalah Islands.

From the eastern Dahrat Meray to Zuggak is 12 miles N. 84° W. and S. 50° E. 3 miles from it is Dahrat Aboo Mussalah. The latter is a very small sand-bank or Island—the former is something larger, and either a sand-bank or a small sandy island; they are both low, and have not a bush upon them.

Shab Marass.

Between these two islands is the north part of Shab Marass, on which the water breaks; it extends from thence 8 or 9 miles to the southward, and is from half to three quarters of a mile broad; there are some parts where it may be crossed, but the south end breaks, and has 15 fathoms close to its east side: farther north, there is no bottom at 50 fathoms. From three quarters of a mile to one mile and a-half to the N.E. of the north point of Shab Marass, are two small breaking patches; the southernmost called Shab Urbeed, has 109 fathoms alongside of it. Between the N.W. point of Shab Marass and Zuggak Island is a one-fathom patch, and to the W.N.W. of Zuggak, from 1 to 1½ miles, is also a sunken patch of 1 fathom: on the western part, close to Zuggak, there are 115 fathoms. S.W. by W. at 3 and 5 miles from Zuggak, are two patches of rocks, and S.W.½S. 4 miles from it is another. Between W.byN. and S.W.byW. of the breakers on the south end of Shab Marass, at 5, 6½ and 8½ miles distance, are five rocky patches, and at 9 miles on the latter bearing is a patch of 5 fathoms. There is also a patch S.byW. 5 miles from the same breakers.

Shab Urbeed.

Shab Alli.

Shab Alli is a long breaking reef 8 miles N.E. by E. of Zuggak, and there is another breaking patch 5½ miles W. by N. from it. N.N.E. of the latter, 2½ miles, is a

reef; and N.E. of the former, 2 miles, is another, with 14 fathoms close to the northward of it, and no bottom with 35 fathoms to the east of it.

From Zuggak to El Elhallah it is N.N.W. 10 miles, and thence to Eloom N.N.E. 3 miles; Mugrabeah lies about midway between, and east of it about 2 miles is Sabeeah. The first of these is a sand-bank; the other three are small low islands of coral and sand, with no ground at 45 and 80 fathoms in their vicinity. To the N.E. of these islands a low sand-bank and two reefs were seen from the mast-head, and beyond them nothing but shoals. El Elhallah, Eloom, Mugrabeah, and Sabeeah Islands.

Dorish is a low sandy island, with bushes on it, upon a coral reef, with no bottom at 40 fathoms close to the S.E. of it. Dorish Island.

N.E. by E.½E. about 9 miles from Dorish is Aboo Dahrah, and 4½ miles E. by S. from it is Gebarah, both small islands, and surrounded with shoals and rocky dangers, which preclude the possibility of a passage. Aboo Dahrah, and Gebarah Islands.

From Dorish to the south end of Aboo Sayel it is 8 miles N.N.E.; this is a narrow perpendicular reef of breakers extending 5 or 6 miles northward, and to the eastward of it 6 or 7 miles are other dangerous reefs. Aboo Sayel.

N.N.W. about 9 miles from the same island is Abbool Gullour, a narrow breaking reef about 3 miles in length N.W. and S.E. Abbool Gullour.

To the northward of this last is Sharbane Island, 13 miles N.¾W. of Dorish. Sharbane is a small low island composed of sand and coral, with some bushes on it, and the remains of a fisherman's hut built of stones. It is in latitude 18° 43′ N. longitude 40° 43′ E. Sharbane Island.

Mooskka Island is about 8 miles north of Sharbane, and 5 miles farther north is Tedgar. Mooskka is a small low island situated upon a coral reef, and no bottom at 50 fathoms close to it. Tedgar is also a small low island with Mooskka Island. Tedgar Island.

some bushes upon it, and a long reef off its south end: there is no bottom at 50 fathoms between it and Mooskka. There is a breaking reef 8 miles N.W. of Tedgar, another at 4 miles N. by E. from it, and a third at 2 miles to the N.E. Doshaggea is a small low island E. by S. ¼ S. distant 6 miles from Tedgar.

Doshaggea Island.

N.W. by N. distant 26 miles from Dorish is Shaker Island, in latitude 18° 52½′ N. longitude 40° 30′ E. This is a small low sandy island, with some bushes upon it, situated on a coral reef, and there is no ground at 120 fathoms close to its north point; half a mile to the westward of it is the north end of Shab Marass, a breaking shoal, which extends 2¼ miles S.S.W.: there is no ground at 70 fathoms between them.

Shaker Island.

Shab Marass.

Five miles N. by W. from Shaker is a ring reef of coral of about 2 miles across, with water breaking all round the edges, and apparently deep water inside. N.N.W. 2½ miles from this is the east end of a narrow breaking reef, which extends about 3½ miles W.N.W.; and 4 miles N.W. by W.½W. is a breaking patch in latitude 19° N. This cluster is called the Marrar-but-el Khyle shoals. Thirteen miles W. by N. of the ring reef, also in the parallel of 19° N., is a breaking patch called Shab Umbarrack, which forms the outer part of the reefs in this neighbourhood.

Ring Reef.

Marrar-but-el Khyle Shoals.

Shab Umbarrack.

Eleven miles N. 10° W. from Shab Umbarrack is a small shoal with 1 fathom on it, and no ground at 145 fathoms close to it, and about 3 miles N.E. of it is a breaking coral reef 4 miles long N.N.W and S.S.E.

Shab Assugga is a low rocky coral island on a reef, lying about N.N.W. 7 or 8 miles from the breaking coral reef last-mentioned, and near the outer edge of the

Shab Assugga.

reefs having no ground at 105 fathoms close to it. N.N.W. 4 miles from Shab Assugga is Jebbarah, a low coral island, with no bottom at 105 fathoms close to it. Dahnac is a low coral island surrounded by a reef, and no bottom close to, at 130 fathoms; it lies 5 miles N. by W.½W. from Jebbarah, and both are surrounded by reefs. Two miles N.W. of Jebbarah is Shab el Multhar, and at the same distance N.E. is Shab el Mahathun, with a small sand-bank on it, and 4 miles N.E. is Shab el Jebbarah. One mile and a half S.E. of Dahnac is a shoal patch, at the same distance N.E. is a breaking patch, and to the N. by W. 2½ miles, is a half moon reef called Shab Amar, with 6 and 8 fathoms off its eastern verge. N.¼E. 5½ miles is Shab Shyir, and one mile N.W. of it is Shab Assabar, to the N.E. of which, 1½ mile, is another; and N.E. by N. from Dahnac 5 miles, is Shab el Girb. Within or to the eastward of this cluster, it appears from the mast-head, full of shoals.

Jebbarrah and Dahnac Islands.

Shab el Multhar, el Mahathun, and el Jebbarah.

Shabs Amar, Shyir, Assabar, and El Girb.

N.N.W½W. 16 miles from Dahnac is Mutatoo Island, close to which there is no bottom at 130 fathoms; and N.½E. from it 3½ miles is Doharah, E. by N. from which 2 miles is Murmah. Jeddere is 2 miles E.N.E. of Mutatoo: these are four small sand and coral islands of little elevation above the sea: there is a small breaking patch ½ mile N.W. of Mutatoo, and another 3½ miles from Jeddere Island, the latter one called Shab Assubb. From 2½ to 5 miles from Doharah Island, and to the N.½E. of it, there are several patches; the outermost and largest is called Shab Genab; and between them and Aboolaad Island, before described, and to the N.E. of Murmah Island, are many sunken patches and two long breaking reefs, one named Shab Soolaim, and the other Shab Shubbuck, with deep water close to them.

Mutatoo, Doharah, Murmah, and Jeddere Islands.

Shab Assubb.

Shab Genab.

Shabs Soolaim and Shubbuck.

Mutatoo is in latitude 19° 45′ N. longitude 40° 1′ E. and on it are the remains of a fisherman's hut, and a considerable number of graves.

The COAST *of the* HEDJAZ *from* LEET *to* JIDDAH, *with the* REEFS *and* SHOALS *lying off and near to the* COAST.

Shab el Jeffine.

W. ¾ N. from Leet, distant 8 miles, is the east point of Shab el Jeffine, which extends from thence in a W.N.W. direction, parallel to the long island, Jeseerat Kishran, in patches to between Summar and Kishran. The soundings are mud about the east point of this Shab, and a vessel can anchor on the inner part of its point, just to the southward of the discoloured water. A good mark for it is the second peak.

Summar.

Summar is on the eastern side of the shoal, forming Kishran anchorage, and has 6 fathoms, mud. This anchorage

Kishran.

is preferable to Kishran, which has a rocky bar at its entrance, with 2¾ fathoms on it: the bar appears to connect the coast reef off Kishran with a shoal to the eastward of it, by which the anchorage is formed, with 5 and 6 fathoms (mud) in it. In a S.W. wind, a heavy swell rolls into this place, and the surf breaks on the bar. Tower Hill bears N. 12° E from the entrance.

Merkat.

Merkat is 11 miles N.W.½W. from Kishran: the anchorage is just to the south of the shoals off it, and affords a

Murram.

little shelter from westerly winds. Marram is 8 miles N.W.½W. from Merkat, and W.¼S. from Tower Hill: the anchorage is bad, there being straggling rocks in it. A vessel wishing to stop here, had better anchor outside the

Abbooshoke.

rocks off it. Abbooshoke is 34 miles N.36°W. from Marram: this place has excellent anchorage in 6 fathoms, but the entrance is very narrow between the reefs off it;

Jibbel Abbooshoke bears from this place N.76°E. Between Marram and Abbooshoke is Shedger, Amare, Soedah, Abboodoodah, Rugguan, Shaybah, Bahair, Muctar Redgmah, Gooss, and Mustubbud. Three miles to the northward of Abbooshoke is Geedan, where there is anchorage, tolerably sheltered, in 4 fathoms, from westerly winds, but open to the southward. Jibbel Abbooshoke bears N.87°E. from this anchorage: it is a small two-knobbed hill, about 12 miles from the coast. Merser Goofs is only a small bight in the coast reef, about 8 miles to the S.E. of Geedan: the anchorage is in 11 fathoms, on rocky bottom, but affords no shelter. Samama is 22 miles N.N.W. from Geedan, and 14 miles to the southward of Jiddah. In the roads, Jiddah Senam peak is a little open to the northward of the Saddle. The anchorage affords tolerable shelter in 9 fathoms, mud. From Samama the coast trends about N.by W.½W. nearly 5 miles; it then turns in north-eastward 1½ mile, and then suddenly to N. by W. 2 miles; forming a low, sharp point, called Ras ûl Uswud, from which Jiddah bears N.N E. 8 miles, and from Jiddah the coast trends N.W½W. 3 miles to Ras Gahaize. Between these projecting points the coast forms a bay, bordered with a reef, and in which are several others, forming various channels and anchorages. S.W. 1½ mile from Ras ul Uswud is the little island Jeseerat Gorab, situated on the shore reef.

Geedan.

Merser Goofs.

Samama.

Jiddah.

DESCRIPTION of the Interior.—Jibbel Sardeeah is a remarkable peak on the highest part of the land in the distant range to the N.E. of Marram; and a little to the eastward of it is a peak still more remarkable by which it may be known.

Jibbel Sardeeah.

Sugar Loaf is a peaked mountain, its top forming three small peaks to the eastward of Kishran: it is in one with Jibbel Sardeeah and Tower Hill.

Sugar Loaf.

Tower Hill—The range of hills from the northward con-

Tower Hill.

verge towards the coast between Marram and Kishran, and the Tower Hill, is a little inside the extreme of the range at Marram: it is a remarkable piece of broken land, not unlike a tower; but off Kishran and to the S.E. of it, it forms with a double rugged top, and appears much larger in this last direction: the piece of land outside of it forms two round hills. First and Second Peaks are south of Tower Hill: these at Marram are the highest peaks on two sloping mountains, like quoins: they both form with two peaks each.

West Peak. At Kishran there is a peak on the second range, called West Peak: it is between the first peak and Tower Hill; and the second peak in this direction forms a round mound on the high land to the right of the first peak, with a peaked elevation on each side of it.

Jiddah. JIDDAH is one of the most considerable places in the Red Sea; it is in the province of the Hedjaz, situated in a low sandy and extensive plain, in front of a range of hills 10 miles distant from the sea: the land further in the interior being considerably higher and mountainous. The town, with its minarets, being white, has an imposing effect from the sea; it is enclosed by a wall half a mile square, with small towers at intervals, and the angles towards the sea are commanded by two forts, with about ten embrasures each, but there are few guns mounted. In the north fort is a house generally occupied by the officer in command of the troops; the south forms in two octagons joined; and in the northern part of it, which is the smallest octagon, stands the flag-staff.

There are three entrances to the town on the sea side, of which the centre and only public one is that at the jetty, but the others are allowed to be used occasionally. There is also a gate on each of the other sides; that on the south is

seldom opened; the northern one is common to all; but to the east is the Mecca gate, through which none but the professors of Islamism are allowed to pass. On the north side are three windmills, near which is an extensive tomb, asserted to be that of our mother Eve, and said to be fifty cubits long by twelve broad. The streets of this place are generally very narrow and irregular, and the houses are mostly composed of madrepore. There is an extensive bazaar, tolerably well supplied, and there is a bazaar-master, but strangers are charged exorbitantly. The only scarce article is biscuit. There is nothing considerable produced at Jiddah or in its vicinity as an article of trade, but from Suez they receive the most useful European articles.

The highest mosque in the town is in latitude 21°28′20″ N., longitude 39°18′15″ E., or 4°1′45″ W. of Mocha.

Jiddah Harbour.

Jiddah Harbour is, perhaps, the most extraordinary of any so called, as to its figure, and is so well protected from all seas that there is comparatively smooth water whatever winds may blow. It lies in a north and south direction, the utmost breadth being 780 yards; the narrowest part, facing the town, 340 yards, and the entrance to it, properly called the gateway, is 250 yards. This space is part of a streak or narrow channel of irregular soundings, extending along the coast reef, which is bounded on the north by Ras el Gahaize, to the south by Ras el Uswud, and to the westward by many breaking reefs, small islands, and sunken rocks, which have deep channels between them. The reefs to the westward of the harbour form in three clusters, containing innumerable patches, and running in a line parallel with the coast, stretching towards the two capes, whose distance apart is 10 miles.

On the south-western part of the outermost cluster of these reefs, and distant from them half a mile, is a dangerous

patch of 1½ and 2 fathoms, called Marrueeah ; and 8 miles to the westward of the town is the outer extremity of a bank of rocks and sand, with shoal patches on it, which is the westernmost danger off this part, and is hereafter fully described.

The tides are so influenced by the winds that is impossible to establish a correct period for the time of high water. In December and January, when the place was surveyed, the greatest rise or fall on the springs was about two feet; but in the hot months, during the northerly winds, when many of the banks are dry, there is less water by about three feet than during the southerly winds in the cold season.

Description of the HILLS, MINARET, *and other* MARKS *used in the* DIRECTIONS *for this place.*

North Hill. North Hill is a high hummock behind the northern extreme of the near range of hills.

Oomarrar. Oomarrar is a rugged hill at the north extremity of the near range of hills; it has something of the quoin shape, with its bluff to the N.W.; when in one with the former hill, it bears S.41°W.

Sugar Loaf. Jibbel Yemeneer, or Sugar Loaf, so called from its resemblance thereto, when in one with the mosque, bears N.74°E.

Saddle Hill. Jibbel Addar, or Saddle Hill, is the highest land about Jiddah, and in the centre of the range; it is sunk in the middle with a north and south brow; the north is in one with the admiral's house on the N.W. extremity of the town, bearing E. 4°.30' N.

Sonnam. Sonnam is a small peak on the highest part of the near high land, on the south side of the bay, in one with Ras El Uswud and the Moosmaree reef, bears N.80°E. The Moosmaree is a breaking patch nearly 5 miles from the shore

reef, and the same distance from the rocky bank, Marrueeah, bearing S.W. close to the west of Moosmaree ; there is no bottom at 120 fathoms.

There are many mosques or minarets, but the most conspicuous one in the centre of the town is the one used, and when in one with the flag-staff, bears N. 52° E. Mosque.

The flag-staff is planted in the fort at the S.W. angle of the town. The fort forms in two octagons, in the northernmost of which stands the flag-staff; the other part is called the South Octagon, and the centre of it is on with the mosque when in the middle of the inner gateway off the Berry reef. Flag-staff.

The Eastern Tower is a low white building on the S.E. extremity of the town wall, and is not much higher than it; when it is in one with the Sugar Loaf, it bears N. 72° E. Eastern Tower.

Description *of the* Dangers, *with the Marks for avoiding them.*

The westernmost, or Rocky Bank, is the outermost danger; its centre is 7 miles S.74°W. from the great mosque. It is 2 miles in extent, north and south, and east and west about three miles. There are five rocky patches on it, namely, Ulfogarnee, Abboolyahood, and Abboolhodere; they are in a line E. 24°S., with channels from 9 to 17 fathoms between them. On the Ulfogarnee, the westernmost, there are 8 fathoms, on the centre one 2½, and on the easternmost 6 fathoms. The other two patches are the Aboo Nuckla and Ul Wustarnee, which lie to the south of the other three nearly one mile, leaving a good channel between, with from 13 to 35 fathoms. On the first are 2½ fathoms, on the latter, 1¾ fathoms in the hot season. Rocky Bank.

Jiddah Hill N.81°E., or the mosque just open to the

right of the Sugar Loaf, bearing N.74°E., leads across the bank between the patches.

Clearing Marks.

The mosque just open to the north of the north brow of the Saddle, leads on the northernmost patches, but open to the south of it just clears them; or the Admiral's house on with the north brow of the Saddle, bearing N.85°E., leads just clear of the bank to the northward.

Saddle Hill N. 78° E., or Sugar Loaf N. 69° E., leads clear of the bank to the southward, and Oomarrar Hill, N.31° E., clears it to the eastward. Oomarrar N.30°E., or Moosmaree S.30°W., is the fair channel course to the eastward of the bank, and westward of the Marrueeah.

Marrueeah.

The first or outer cluster of reefs consists of breaking patches, except the Marrueeah, which is a sunken patch of 1½ and 2 fathoms, distant half a mile N.50°W. from the centre of the largest of the breaking patches on the south part of this line, called the Shaabane; or it is S.40°E., upwards of 2½ miles from the Ul Wustarnee above-mentioned. The eastern side of this line of reefs is connected by many sunken patches to the second cluster. The northernmost patch of this range is called the Ghaham Reef, and from it the mosque bears N.68°E., distant 4½ miles. The south extremities of this reef and of the second, stretch towards Ras ul Uswud, and form the northern boundary of the south channel. There is also a channel between the Marrueeah 1½ fathom patch, and the breaking Shaabane reefs; and when Oomarrar bears N.23°E., steering for it will conduct between the patches and carry the vessel a little to the westward of the outer gateway in the second cluster of reefs. The mark to clear Ghaham, the north end of the first or outer line of reefs, is the Eastern Tower on with the Sugar Loaf.

First or Outer cluster of Reefs.

The second or centre cluster of reefs, in which is the

Outer Gateway, is more extensive than the former, and is also in patches, with many channels between them; but that preferred is through the Gateway, which is 270 yards broad, from which the flag-staff bears N. 58° E. distant 3 miles. This Gateway is formed on the north side by the southernmost and largest of the Fellaha breaking shoals, with a sunken patch on its eastern end, with deep water between it and the large shoal, and on the south by dangerous sunken patches. When in the centre of this entrance a patch will bear E. 40° S. distant 300 yards, which, with the other sunken patches on the south side, is to be avoided by passing along at about 100 yards from Fellaha large breaking reef. After passing its south point, the course along it will be about N. 55° E.

Second or Centre Cluster of Reefs.

Outer Gateway.

There is a channel between the northern extremity of this second cluster of reefs and the coast reef off Ras el Gahaize, and from thence to the south to the Inner Gateway. There is also a channel between the southern extremity of this second cluster of reefs, called Shab Mahmood, and the coast reef off Ras el Uswud, and thence to the northward to the Inner Gateway. These two channels are constantly used by the buggalows: the *Benares* has been through them both. The entrance through the northern channel is similar to the Outer Gateway: that through the south channel is half a mile wide throughout; but there are overfalls in both.

MARKS *for the* SECOND *or* CENTRE LINE *of* REEFS. —For the Outer Gateway, is the Mosque on with the outer angle of the Flag-staff Tower.

Sailing Marks.

For the South Channel, the north brow of the Saddle N. 71° E. leads in clear of the south ends of the first and second clusters of reefs; and having rounded Shab Mahmood, steer N. 8° E. for the Inner Gateway.

Third or Inner Cluster of

The third harbour, or inner cluster of reefs, in which is the Inner Gateway.

This has channels for buggalows and small boats towards its north and south ends, and in the centre of the reef is the Inner or Double Gateway, as it may be called, for it is formed by four shoals, the two outermost of which are breaking reefs; that on the south is Abboo Harreet, and that on the north Beahree. Three hundred yards from them further in is Berry breaking reef, with a sunken patch off it on the northern side of the Gateway, and a sunken patch lies on the south side, both of which may be seen by a good look-out. This entrance is 250 yards wide, and the flag-staff bears from it true N. 60° E., it is the only entrance in the cluster for ships. When in the centre of the Inner Gateway there are two patches of 1 and 2 fathoms, in a line with the Eastern Tower, bearing true N. 66° E.; the nearest is only 500 yards from the entrance, and is off the end of Berry, as already mentioned, and not more than 70 yards from it. The second is a rock of 1 fathom, half a mile, or 1000 yards off; it lies off the eastern side of Berry, and the passage is between them, luffing round Berry reef to run up into the harbour; the distance between them is not above 400 yards. There is also a third small patch, bearing from the Gateway N. 61° E., distant 1200 yards; and a little to the north of this is a shoal 500 yards long with 1 fathom on it.

Sailing Marks.

The MARKS *for the* THIRD *or* HARBOUR REEF.—The flag-staff a little open north of the Minaret leads to the Inner Gateway. For clearing the Berry sunken patch, the flag-staff 20 yards, or half a ship's length, open to the north of the Minaret, or the Minaret and the centre of the south octagon in one; but the Minaret must not be brought on with the southern extreme of the octagon, as that is on

with the shoal that forms the southern part of the Gateway.

Brief DIRECTIONS *for* APPROACHING *and* ENTERING *the* HARBOUR.

On approaching within 30 miles of Jiddah, the Saddle Hill will be seen, if the weather is clear; when its north brow bears N. 81° E. you will be off the harbour. In running up, get sight of the Moosmaree, but do not bring it to the westward of S. 7° W. until you are sure of the above bearing of the Saddle. When the Mosque is on with the Sugar-loaf you may steer for them across the Rocky Bank between the shoals, which are easy to be seen. When clear of this bank, the course will be about E. true, 2 miles, which will take you to the Ghaham breaking reef, and at 150 yards north of it, the Outer Gateway bears E.4° S. distant 1¼ mile. On approaching it keep the Fellaha breaking reef on board, to clear the patches on the south side of the channel, one of which bears E. 4° S. from the entrance, distant only 300 yards; therefore, after passing the south point of Fellaha breaking reef, haul more to the northward to avoid them, but take care also to be clear of a sunken patch near the east end of Fellaha breaking reef. A true course N. 55° E. one mile should carry a ship along the large breaking reef, and the sunken patch off its east end, to the Inner Gateway. To avoid the patches within it, bear away to the eastward the moment you are within the narrow outer part of the Gateway, and the course will be about true N. 72° E., and bring the Flag-staff about 20 yards, or half a ship's length, open to the north of the Minaret before you reach the nearest shoal (the Berry sunken patch), keeping it on your larboard hand, and a sunken patch will

be on your starboard hand, which forms the south side of the Channel of Berry. If the wind is at N.W., luff as close as you can with safety round the Berry sunken patch, close on the end of the Berry reef, as it is steep to and easy to be seen, and keep along the edge of the Berry reef to avoid the sunken rock 400 yards to the eastward of it, and the other two patches which are near the shore reef on the eastern side of the channel. But if the wind is southerly, the course up the harbour, after passing the Berry sunken patch, will be by compass about N.N.E., and ships may anchor with the Mosque from E. 12° N. to E. 12° S., in from 3½ to 5, 6, and 7 fathoms. The latter bearing of the Mosque is where native ships always lie, and is the most convenient for boats going to the shore; but it is just to the north of the narrowest part of the harbour.

Extra Remarks.

If after getting off the Moosmaree reef you prefer passing within the outer rocky bank, refer to the description of that bank in the preceding account of it.

Or, if it be found convenient to go through the South Channel, or only through its entrance, for anchorage, see the description of the Second Cluster of reefs, and remarks at the end of it.

Coozermere Channel.

To pass through the North Turruck, Coozermere Channel.

The following directions are added for passing into the north of the second cluster of reefs, in case there should be a necessity for so doing; but there are alarming overfalls and patches in it, and a vessel would probably be

longer in clearing the reefs by going that way than by going through the second Gateway.

Run in with the Mosque bearing S.75°E., or with Jibbel Widri (a black conical hill to the left of Tennam Peak) on with the Admiral's house. Either of these marks will carry her in between Guttal Omul Hallala, Dergoeg, and Ras el Muggulat reefs. Having passed through these, haul a little to the south, about S.50°E., which will carry her through the Gateway formed by Guttal Coozermere and Towwelah reef towards Aboo Humroon shoal; and when midway between the latter two, haul up about S.18°E. and keep a good look-out for a shoal patch, which should then be about half a point on the starboard bow, and which is in a line of S.87°W. from the great Mosque. Having passed this patch, steer true S.8°E. for the Inner Gateway, and proceed in from thence, as already directed in coming from the southward.

CONCLUSION.

When off the Harbour of Jiddah, if in want of a pilot, make the signal with one or more guns, as necessary, and they will come out. In running in they are mostly guided by the eye; for the channels are so narrow, that the marks will be found of little use, except in approaching the place; and towards noon is the best time for going in, as owing to the transparency of the water, the sunken rocks then appear as a dark green shadow on the surface, but which rocks cannot be discovered until upon or close to them, when the sun is low to the eastward, and there is much glare, or in thick, hazy, or cloudy weather.

CONTINUATION *of the* OUTER REEFS *from* LEET *to* JIDDAH.

About 2½ miles S.S.W. of Shab el Jeffine anchorage, and about S.W. 7 miles from Kishran anchorage, there are some rocky patches with deep water close to them. The

Gad Amaze.

Gad Amaze is the outermost cluster of breaking reefs, upwards of 2 miles in extent, in latitude 20° 15′ N. They are about 16 miles S.W.byW. from Marram; and between them and the north-western extremity of the extensive Outer reefs to the southward, there is an open channel leading in to the coast, towards Kishran and Leet. There are numerous shoals between Gad Amaze and Marram, and extending to the E.S.Eastward towards the coast at Merkat. The

Shedger Reefs.

Shedger Reefs lie about 5 to 7 miles from the coast, with a channel between.

Guttah el Abboodooda and Guttah el Rugguan Reefs.

Ten miles to the north-westward of these is the Guttah el Abboodooda; and to the N.W. of it is the Guttah el Rugguan and Toweel Rugguan, the last of which is a remarkable reef, two miles long, and the farthest from the shore, being 7 miles off; so that, like Gad Amaze, it may be frequently seen by vessels proceeding up or down the sea.

Abbooshoke Reefs.

The Abbooshoke reefs are about 16 miles north-westward of Guttah el Abboodooda; and in this space, besides the

Bahair, Guttah el Shaybah, Muggeradeeb, Guttah el Goofs, and Mustubbud Reefs and Patches.

Rugguan shoals just mentioned, are the Bahair, Guttah el Shaybah, Muggeradeeb, Guttah el Goofs, and Mustubbud reefs and patches. Between the reefs in this space there are channels, but very difficult ones, and the shoals are so numerous, that they may be considered as forming a connected line of shoals, and ships ought not to attempt to cross them.

Guttah Geedan

At 11 and 13 miles frather is the Guttah Geedan and

Guttah Tuttefah reef; and in this space is an open channel to the coast—the latter is only 4 miles off shore. and Guttah Tuttefah Reefs.

N.W. about 6 miles from Guttah Tuttefah reef is the Uleusser Elyemmarneer, and in this space is an open channel to the coast. Uleusser Elyemmarneer Reef.

From Uleusser Elyemmarneer to Uleusser Shamier is about 4 miles N.N.W., and to the northward of the latter, 2 miles, is a cluster of three or four, called Cobane. These are all breaking shoals, at five to nine miles from the shore with deep channels between; the *Benares* having worked among them, and between them and the shore. Uleusser Shamier and Cobane Reefs.

N. by W., about 4 miles from Cobane, is a reef called Urgo Gorab, with no bottom at 120 fathoms close to the westward of it; and 4½ miles farther is another reef, called Moosmaree, lying nearly 5 miles westward of the Coast reef; there is no bottom at 120 fathoms close to the westward of it. These are both breaking reefs, and require particular attention when proceding to or from Jiddah.

The INNER CHANNEL *from* CAMARAN ISLAND *to* LEET

The Inner Channel, from Camaran to Leet, is bounded on the western side by numerous islands, rocks, and rocky patches, profusely scattered on and about the inner edge of the Outer Reef, and on the Eastern side by the coast which is bordered by a reef nearly throughout the whole extent, in which are several breaks, and some of them form secure anchorages.

The south end commences at Camaran, where it is only 700 yards wide between Camaran reef and Ras el Bayath, and is nearest to the latter; from thence its breadth increases to about 2 miles, until at the narrow part between Humreek Island and the Coast reef south of Loheia:

the patches at 4 to 6 miles southward of Humreek may be passed on either side.

The Channel from Loheia increases in breadth to 2 miles or more, until opposite Ras Mussahrib, where it is rather less than two miles : the soundings are moderate, and will be best understood by looking at the chart. Passing Ras Mussahrib, it increases in breadth to 4 miles between Toag Island and the coast, and also within Ashig Island reef, beyond the north end of which it is 10 miles wide, and so continues until between Dahret Jaffree and the Coast reef, where the breadth is reduced to less than 5 miles, and further on to less than 4 miles, between Omel Currip and the Coast reef off Gheesan, and so continues as far as Ras Toorfah.

Between Shoorah and the main the breadth of the channel is little more than 2 miles; but after passing Theran, where its breadth is 7 miles, it increases to 10 and 12 miles, till abreast of Aboo Lelf Island it is again contracted to 4 miles, between the south end of the reef extending from Jeseeral Mogid Island and a projecting reef from the shore; and 9 miles farther it is only 1¼ mile wide, between the north end of that reef and the reef off Nahood. Farther on, between the bank called Ome Kergane and the Coast reef between Nahood and Ernege, the channel is little more than a mile wide. The patch off the north end of that bank may be passed on either side, and a course steered to pass at 1½ or 2 miles to the west of Halli point and Ras el Aboo Kalbe. Hereabout are some reefs nearly in mid channel, which may be passed on either side, as most convenient, always observing to keep a good look-out. If it be deemed advisable to pass to the eastward of these reefs, it will be best to sail through Undareh Roads, as good anchorage will be found there, if necessary. Having

passed Undareh and Ras Abboo Mutnah, the best channel northward is between the Moolgamarree and Ummusseefah Islands and the main to abreast of Coomfidah; or if more convenient to pass between these islands, care must be taken to avoid the rocky shoals in their vicinity.

At Coomfidah the channel is 8 miles broad, with 18 and 20 fathoms water. A course may be steered from abreast of Coomfidah, about N.W.$\frac{1}{4}$N., towards the south end of the Farrar Islands, observing that the inner edge of the Outer Reef to the southward of the islands is marked by rocks and rocky patches, with deep water close to. By passing near this edge, the patches lying about 3 miles to the south-eastward of the islands will be avoided. The Farrar and Cuffeel Islands mark the west edge of the channel, and may be passed at a moderate distance; and, should it be necessary, good anchorage may be found at Dogar.

Having passed the Cuffeel Islands, reefs and rocky patches continue to mark the edge of the Outer Reef to abreast of Serrane Island, off the east end of which are two patches; between these patches is the best channel, about one mile wide, and from thence, still by the edge of the reef about N.N.W. to the S.E. end of Jennerbet, and the small island to the east of it. Beyond these begins an extensive reef, near the middle, forming two channels, that near the coast being about 400 yards wide, with 5 fathoms in it. This is considered to be the best; but the western one is wider. Either may be used, as most convenient, according to the direction of the wind; but a strict look-out for the shoal patches is absolutely necessary, particularly in the western channel.

Off Gillargin the channel is two miles broad; and at this place good anchorage may be had, if necessary.

From hence to Leet the coast is entirely bordered by a reef; and there are several patches scattered about in mid channel, leaving a clear space of only 2 miles between them and the Outer Reef. Raker has a good anchorage, which may be taken, if necessary. Directions for it, and also for Leet, will be found in pages 63 and 64.

The COAST *of* ARABIA *from* JIDDAH *to* TIRAHN ISLAND, *and thence to* RAS MAHOMMED.

From Ras Gahaize the coast runs northward, about 11 miles to Sherm Oubhoor, which runs in north-eastward 5 miles. At 4 miles north of the Ras the coast reef ceases, and the shore is bold, there being no bottom at 70 fathoms, within a mile of it. From Sherm Oubhoor the coast turns to N.W., and N.N.W. 14 miles to Ras Dahlimar, and thence N. $\frac{3}{4}$ W. 6 miles to Ras Hartebah, in latitude 22° 0′ N. and longitude 39° 0′ E.

Eliza Shoals.

N.N.W. $\frac{1}{2}$ W. 9 miles from Ras Gahaize is the S.E. point of the Eliza Shoals, from whence the inner or eastern edge trends about N.N.W. $\frac{1}{2}$ W. and N.W.byN. about 21 miles to abreast of Ras Hartebah, forming the west side of a deep channel, of 2 to 3 miles wide, between it and the coast. From 5 to 6 miles about W.S.W. from Ras Hartebah, and on the inner edge of these shoals, is a large patch of reefs and deep water, called Guttah Degaize. About 10 miles W.S.W. westerly from the S.E. point, is the S.W. point of this extensive bank, in latitude 21 37′$\frac{1}{2}$ N., and bearing W.N.W. 15 miles from Ras Gahaize. About 3 miles N.W. from this point, and on the western edge, is a reef about 3 miles in length in the same direction, called Shab ul Kebeer, with no bottom at 70 fathoms close to its west side. All the S.W. and south part of

Guttah Degaize.

Shab ul Kebeer.

these shoals have breaking rocky reefs, with deep water close to them. Reefs and shallow patches extend also to the N. by W. from Shab ul Kebeer, and about N.W. by N. 11 or 12 miles from it, also on the edge of the bank, is another reef, in a north and south direction, called Aboo Farhramish, near which is good anchorage, in latitude about 21° 52′ N.

Aboo Farhramish.

From hence the west edge of the shoal takes a north direction to its N.W. point, where there is a reef called Aboo Murdafer, where there is good anchorage, sheltered from N.W. winds. This is the northern Eliza Reef; its west end is in latitude 22° 2′ N., and longitude 38° 48′ E., from whence it extends 3 or 4 miles in a N.E. by E. ½ E. direction, in a narrow line.

Aboo Murdafer, or northern Eliza Reef.

A ship from the northward, if a good look-out be kept, may with safety take advantage of the Inner Channel already mentioned, between the Eliza Reefs and the low sandy coast fronting them, it being from 2 to 3 miles wide, with no bottom at 60 and 70 fathoms, and both sides bold to. Should night come on before a ship is through this channel, she may haul a little to the westward, and anchor as most convenient under the lee of any of the reefs, keeping in mind that the range of reefs which form the west side of this channel, where anchorage may be had, terminate in latitude 21° 46′ N., when two remarkable hills with peaks on them, called the Sisters, which form the northernmost high land near the coast, bear about E. or E. by S. To the southward of this, 6 miles, are only a few patches, which do not afford good anchorage from N.W. winds. The northern entrance to this channel lies close to the west end of the northern Eliza Reefs, Aboo Murdafer. A course S. 65° E. 8 miles, with soundings from 20 to 40 fathoms, will lead into the channel; when you have no

Inner Channel between the Eliza Reefs and Shore.

Anchorage.

soundings, a course may be thus steered close along shore, to the reefs off Jiddah. In passing close along the coast the Inlet called in the old charts Charles River, but by the Arabs, Sherm Oubhoor, will be observed, which is an extensive inlet of the sea. The entrance is narrow, and so it continues some distance up, with soundings from 18 to 25 fathoms in it, and then widens into some beautiful bays: but it would not be prudent to anchor here, it being difficult to quit with a light land-wind, if there is any swell at the entrance, which is generally the case after hard N.W. winds. In other respects, vessels may lie quite land-locked inside, with scarcely space to swing, except in the upper part, which is distant from Jiddah Mosque 14 miles.

Sherm Oubhoor.

From Ras Hartebah the coast trends N.N.E. ½ E. 21 miles to Ras Maluk, a low sandy point, forming between them various Merzas of considerable extent, but difficult to approach, on account of the numerous reefs and shoals with which all this part of the coast is bordered, extending from 6 to 8 miles from shore; there are, however, some channels among them. A channel lies close to the west side of Heyga, a low sandy island which is 3 miles N. by E. of Ras Hartebah, and it leads out again into a large channel 5 miles to the northward of Haramil, which is a similar low island, where these reefs terminate, at 9 miles to the westward of Ras Mahluk. Haramil island is low and sandy and covered with bushes, in latitude 22° 15′ N., longitude 39° 3′ E.

About 5 miles N. by W. from Ras Mahluk is Ras ul Khoormah, also low and sandy, forming on its south side a bight in the coast full of shoals: and about 3 miles to the north of it, the coast reef which began at Ras Dahlimar terminates.

From Ras ul Khoormah about 12 miles N. ¼ W. is Merza Deneb, where good anchorage may be had in 7 to 10

Merza Deneb.

fathoms. From hence the coast takes a N.W. by N. direction, and at the distance of 8 miles is Sherm Rhabuc. All this part of the coast is a low sandy desert.

N. 20° E. from the west end of the Northern Eliza Reef, at the distance of 19 miles, and N. 59° W. from Haramil I. 8 miles, in lat. 22° 19′ N.. and long. 38° 55′ E. is the south end of a large reef called Shab Nazer, on the N.E. side of which there is indifferent anchorage. From this reef, N. 19° E. to the distance of 23 miles, numerous reefs exist on a bank of soundings, with passages and anchorages among them: their western edge preserves nearly a straight line, and there is no bottom at 40 or 50 fathoms outside them. This bank of reefs is from 2 to 5 miles broad, and a little to the westward of their northern end, in lat. 22° 38′ N., and long. 38′ 58′ E., lies a large reef called Aboo Sahain, under which there is good anchorage from N.W. winds. The S.E. part of this bank of reefs is about 1¼ mile from the N.W. part of the reef; west of Ras Mahluk but off Ras ul Khoormah the channel is 5 miles wide, decreasing again to 1¼ miles, as Sherm Rhabuc is approached. There is a rocky shoal about mid-channel, off Ras ul Khoormah, but in all other parts no bottom at 40 and 50 fathoms. There is also a patch about 2 miles to the S.E. of Shab Nazer.

Shab Nazer Reef.

Aboo Sahain.

Sherm Rhabuc in lat. 22° 23½ N., and long. 39° 4′ E. is a capacious inlet, affording excellent anchorage inside its entrance in 8 to 12 fathoms, perfectly sheltered from all winds, and easy of ingress and egress when N.W. winds are blowing. This is a sacred spot to Mussulmen pilgrims, who here disrobe and put on the white garb of pilgrims.

Sherm Rhabuc.

At this port of Rhabuc wood, water, and other supplies may be obtained at a cheap rate, but the Bedouin Arabs

are not to be implicitly trusted. An extensive date grove and several villages are situated about 5 miles inland. In the interior of the country there is a range of mountains, of which the most conspicuous and nearest is a double bluff hill with precipitous sides, called Jibbel Rahab: it is in latitude 22° 32′ 30″ N., and longitude 39° 29′ 30″ E.

Jibbel Rahab.

West from Sherm Rhabuc about 10 miles is the east end of a large reef, about 3 miles in extent N.W. by W. called Shab ul Abbeat, with no bottom at 30 and 40 fathoms near it; and 9 miles W.N.W. from the N.W. end of this reef are 4 small shoals lying close together called Shab Comsah, they are in lat. 22° 47′ N., and long. 38° 42′, and there is no bottom at 40 fathoms close to the eastward of them. At 3 miles E.b.N. from them is a rocky patch, with no bottom at 50 fathoms near it.

Shabul Abbeat.

Shab Comsah.

From Sherm Rhabuc 15 miles N.W. by W. is Sherm ul Khurrar, and here again begins the coast reef; and 8 miles further N.N.W. is a low sandy point called Ras Mustoorah. Ras Delaidelah is about 5 miles from Ras Mustoorah in the same direction, the coast between forming a bight, in which is an island on a reef, and many rocky patches; there is also a bight full of rocks to the northward of this Râs. From Ras Delaidelah 14 miles N.N.W., is Ras ul Kheehum, and 13 miles further in a N.N.W. ½ W. direction is a low sandy point called Ras Abbiat, the coast throughout the whole extent bordered by a coral reef, with shoal water and rocky patches, running off from 4 to 7 miles from shore, and no bottom at 30 fathoms close outside.

Serm ul Khurrar.

North from Shab Comsah in latitude 23° 2½′ N., lies a small reef, on the west side of a bank of soundings of 15 to 25 fathoms; this is the outer reef of a large cluster called Guttah ul Khurrar, which lies to the eastward of

Guttah ul Khurrar.

31° 41′ E. longitude. There are passages and anchorages among these reefs, also a safe channel near the shore, with no bottom at 30 and 40 fathoms. The outer boundary of the Khurrar Reefs lies 9, 10, and 11 miles from the main land, which is low near the sea; they extend from lat. 22° 48′ to lat. 23° 5½′ N.

About 5 miles N.N.W. from Ras Abbiat is Sherm Braickhah, running nearly 3 miles inland E.N.E., at the head of which are the ruins of a fortified town. Here is good anchorage for small vessels, and stock is procurable, but the natives are not to be trusted; in fact the whole tract of coast from Ras Hartebah to this place is inhabited by the Hurrub Bedouins, a tribe whose character is proverbial throughout the sea for ferocity and treachery, so that it is dangerous to land upon it. Sherm Braickhah.

N. W. ¼ N., 38 miles from Sherm Braickhah is the entrance to Yembo, the coast between bending in a little, and bordered throughout with a coral reef. At the distance of 6 miles from the former is Ras Attiah, and 8 miles further Ras Madges, to the southward of which is good anchorage, in a bight of the coast reef. Ras Madges.

North from the outer Khurrar reef are the numerous shore reefs before mentioned; a N.N.W. line from the outer Khurrar reef leads from 3 to 6 miles to the westward of these reefs, to latitude 23° 27′ N., and longitude 38° 28′ E. in which situation there is a small reef, the southern one of a group extending 18 miles to the northward, to latitude 23° 45′ N.; they have soundings and indifferent anchorage among them, but no soundings on their outside. Their inner edge is from 2 to 3 miles off the coast reef, and their N.W. extremity extends to longitude 38° 21′ E. full 11 miles W.byS. from Ras Attiah. About 3 miles W.S.W.

from Ras Abbiat is a reef with 7 fathoms on it, and no bottom at 40 and 50 fathoms near to it.

Shab Suflamy.

About 17 miles westward of Ras Abbiat, in lat. 23° 30′ N. and long. 38° 18′ E., is the S.E. end of a large reef called Shab Suflamy, extending thence 3 miles N.N.W., having no bottom at 100 fathoms close to the southward. Jibbel Soubab bears from it S. 75° E., distant 46 miles.

Jibbel Soubah.

Jibbel Soubah is a remarkable high mountain near the sea, of about 4,500 feet elevation, and higher than any other hills between Jiddah and Yembo; it can be seen at the distance of 40 miles. The upper part forms a convex line, with two small peaks near the centre; it is in lat. 23° 18′ N., and longitude 39° 8′ E. A range of very high land extends some distance to the N.N. Eastward of Soubah, and has several remarkable peaks on it; but these are seldom seen far at sea, unless the atmosphere is very clear.

Thetis Reef.

About N.W. by W. 13 miles from the last mentioned reef, Shab Suflamy, and 27 miles southward of Yembo, in latitude 23° 38′ N., and longitude 38° 6′ E., is the Thetis Reef, a small and dangerous reef, having no bottom at 120 fathoms very near to it. This reef was discovered in the Honorable Company's cruiser *Thetis*, in 1829.

Shab Subbah, or Seven Reefs.

About 7 miles N.b.W. ½ W. from the Thetis Reef is the south easternmost of a cluster of shoals, called Shab Subbah, or the Seven Reefs, in latitude 23° 45′ N.; they thence extend about 9 miles N.W. N. to latitude 23° 53′N. and are about 2 miles wide, their western boundary being in longitude 37° 58′ E. These are the most dangerous reefs on this part of the coast, as they lie so far from the land, and there is no bottom at 100 fathoms at a short distance to the westward of them.

Besides these there are several reefs and rocky patches lying from 5 to 9 miles off shore, between Ras Madges and Yembo, with deep water between them. The outermost of these is in latitude 23° 50′ N., longitude 38° 13′ E. The northernmost called Guprear is in latitude 24° 2′ N., longitude 38° 2′½ E., and bears from Yembo entrance S. 52° W. 5¼ miles: there is good anchorage in N.W. winds at this reef. Four miles to the westward of Guprear is another small reef, and W.N.W. 6½ miles from Guprear is another with 7 fathoms near, and no bottom at 70 fathoms to the eastward of it. Another small reef lies S. by W. about 3 miles from Yembo. Guprear Reef.

These are the only dangers in approaching Yembo, and they are easily avoided; by a good look-out, a vessel may stand close to them without fear.

YEMBO, the Port of Medina, is governed by a Turkish Effendi, and garrisoned by a few troops from Egypt. It is situated on a low sandy shore, and on the northern side of a capacious inlet of the sea. The entrance of the harbour lies in latitude 24° 4′ 30″ N., and longitude 38° 6′ E. Yembo.

The high houses and mosque can be seen 13 miles distant, and the approach to it is not dangerous; there are no soundings close to the entrance, which is 300 yards across, and a vessel can only enter with a fair wind. A patch of rocks bounds the southern side of the entrance, and extends a little distance to the N.W. on which the N.W. swell breaks very heavy, making the harbour difficult to quit when N.W. winds have been blowing; and the land wind in the morning is scarcely sufficient to carry a vessel out against the swell. This endangers a vessel being drifted on the rocks, should the land wind fail and the boats be unable to tow the vessel against the swell. This was the case with the

Honourable Company's surveying brig *Palinurus*, and she narrowly escaped being wrecked. After entering the inlet it widens considerably, and forms a capacious harbour, with 4 to 6 fathoms in it; there is a conspicuous white tomb in the low sandy point forming the northern side of the harbour, and there is a small, sandy island, covered with bushes, having a sheik's tomb near its east end, on the broad bank of the reef forming the south side. There is a remarkable range of high table mountains to the N.E. of Yembo, called the Rudduah Mountains, which are by measurement 6,000 feet high; the N.W. brow bears from Yembo N.18° E. distant 31 miles; the S.E. brow N.23° 44′ E. distant 31½ miles. Yembo affords a good and cheap supply of excellent fresh water, which is kept in covered or vaulted tanks, in and near the town; its price about 300 gallons for one dollar. Wood is scarce; sheep in abundance, at 1½ dollars each; a few bullocks, fowls, fruit, and vegetables are to be obtained. The only dangers on approaching Yembo have already been described.

Rudduah Mountains.

Sherm Yembo. Sherm Yembo, a capacious harbour and inlet of the sea, N.53°W. from the port of Yembo; the entrance lies in latitude 24° 9′ N. and longitude 37° 59′ E. It is a safe and commodious harbour, being easy of ingress and egress for the largest ship; the soundings are from 20 fathoms at its entrance, decreasing to 10 and 8 fathoms a little way in, from whence it branches off in several arms, the northern one to the distance of five miles inland. The coast about Sherm Yembo is a low, sandy shore, and clear of dangers, having no soundings till near Cape Bareedy, off which, distant 8 miles S.47°E. are several reefs, with anchorages and passages between them. Soundings from 13 to 25 fathoms extend to the south-eastward of these reefs; the

land opposite forms a deep bay. There are no soundings any distance to the westward of the reef off Bareedy, and none at Cape Bareedy, 100 yards from the narrow reef bounding the shore.

CAPE BAREEDY is a moderately elevated promontory, forming a convex curve to the westward, about seven miles in breadth. Several points form on this cape, all having different names by the natives, I shall therefore take the centre and most southern part of this promontory for Cape Bareedy, which lies in latitude 24° 16′ N. and longitude 37° 38′ E.; the face of the shore is bounded by steep cliffs, and there are no soundings close to them. The dangers to the south-eastward have been described; there are none to the south-westward or west. Inland to the north and north-eastward of Cape Bareedy there is a remarkable range of broken hills, of moderate elevation; the northern and western one, called Sugar-loaf, bears from Bareedy N. 1° W. distant 17 miles; the southern and eastern one, called Scragged Hill, bears from Bareedy N. 30° E. distant 16½ miles: these are very conspicuous hills when nearing the coast, and are seen under the high land to the north-eastward of them, which range of mountains extend from Yembo to Hassanee Island. In the centre of this high land is one more elevated and conspicuous than the rest, called Round Mountain; it is in lat. 24° 43′ N. and long. 38° 0′ E.; the northern part of the high land is nearly abreast of Hassanee Island.

Cape Bareedy.

Sugar Loaf.

Scragged Hill.

Round Mountain.

The first danger to the northward of Cape Bareedy is a small reef, called Shab Grushe, or Shark Reef; it bears from Bareedy N. 63° W. distant 13 miles, lies 4 miles from the coast, and is the southern one of a group, which extends 4 or 5 miles from the coast to the northward, and among which there is indifferent anchorage.

Shab Grushe.

Palinurus Reefs, or Shab Shaybah.

To the W.N.W. of Shab Grushe, or Shark Reef, distant about 13½ miles, lie the Palinurus Reefs, called by the natives Shab Shaybah; these are a group of small reefs, of 4 or 5 miles in extent, having no soundings or anchorages near them. Being the outer reefs and situated fourteen or fifteen miles from the land, they are dangerous for a ship to approach in the night: the centre and western one lies in latitude 24° 26′ 30″ N. and longitude 37° 12′ E.; from this the northern reef bears N. byW. 2½ miles, the southern one S.S.E. 3 miles. On the southern end of the large reef, which lies to the eastward 4 miles, there is a rock above water, about the size of a ship's capstan. A good mark for these reefs is Scragged Hill, on with the north brow of the Rudduah Mountains.

North from the centre of the Palinurus reefs, to the distance of 9½ and 12½ miles, in latitude 24° 38′ N. are four small shoals, with sunken rocks close about them; there are no soundings to the westward of these reefs.

Aboomutarah.

In latitude 24° 44′ N. and longitude 37° 12′ E. is the centre of a group of large and small reefs, extending 2½ miles to the north-westward, and 2½ miles to the south-eastward, on a bank of sunken rocks and soundings, about 1½ miles broad; indifferent anchorage for a small vessel may be found under these reefs; they are named by the Arabs Aboomutarah, and lie 4 miles west from the shore, forming a point called Ras Mahar: there are no soundings to the westward of these reefs.

Sherm Mahar.

SHERM MAHAR, is a good anchorage, in a bay on the coast, E.byS. 6 miles from the south of Aboomutarah Reefs; this place is capable of affording shelter to any ship from N.W. winds; you anchor in 7 fathoms sand. Moderately elevated table hills approach close to the sea, a remarkable gap in them forming a deep valley points out the anchorage,

which lies in latitude 24° 41′ N. and longitude 37° 20′ E. Sheep are to be obtained from the Bedouins, but water is scarce. There is another anchorage on the coast, 4 miles to the S.E. called Sherm Hussay, but it is indifferent on account of its being so contracted, the depth of water great, and bottom foul. Sherm Hussay.

Shab Mombarrack is a small shoal, with anchorage on its south-east side; it lies N. 56° W. distant 4 miles from the centre of the Aboomutarah Reefs; this is the outer danger, till approaching Hassanee Island, which lies north from this, distant 12 miles. Shab Mombarrack.

HASSANEE ISLAND, the centre or high part of which is in latitude 24° 58′ 15″ N. and longitude 37° 9′ E., is 4 miles in length, N.W. and S.E., and about 2 miles broad; the island is 400 feet high at the centre and northern end, but slopes gradually down to a low point on its south, and it can be seen from the deck of a ship 25 miles in clear weather. It lies 10 miles from the coast, which here forms a deep bay to the eastward, in which are several reefs and two small islands. There is spacious anchorage near the south-east of the island, in 10 or 15 fathoms; but care must be observed not to haul too close round the S.W. side, as there is an extensive reef and sunken rocks, running off from the S.W. point to the S.E., to the distance of 1½ miles. The best anchorage is round the S.E. point, close to a large Arab village, which is inhabited some months in the year by the people from the mainland. The anchorage abreast the village affords shelter from all winds. A scanty supply of sheep, wood, and water, can be obtained from the natives who bring it from the main, which is here rich in pasture and dates; but caution ought to be observed in transactions with the natives. Hassanee Island. Good Anchorages.

S. 48° W., distance 6½ miles from the centre of Has-

Dangers to the westward of Hassanee Island.

sanee Island, is a small reef, having no soundings near it: N. 72° W., distant 8 miles, is another small reef; these are the outer reefs from the island, others lie to the eastward, between the latter reef and the island, where anchorage may be had. There is a small rocky island of 300 feet elevation, half a mile distant from the N.W. end of Hassanee, called Libnah Island, having a channel between it and Hassanee, only to be used by boats. To the N.W. of Hassanee, distant 4 miles, a long reef is connected with the north end of the island. This extensive reef reaches in broken patches, rocks, and sand-banks, to the distance of 15 miles to the N.N.E., having narrow and dangerous channels between them.

Libnah Island.

A line N. 40° W. from the centre of Hassanee to latitude 25° 23′ 30″ N. reaches the south end of the reef, which extends 14 miles to the south-eastward of the low coral island of Mushabeah; this line just touches the western boundary or outer reefs, consisting of several small but dangerous reefs, situated between Hassanee and the long reef off Mushabeah. Inside of these reefs a ship ought on no account to venture; they have no soundings near them, and lie 15 miles from the coast, which, in this part, is pointed by numerous coral islands and reefs.

In latitude 25° 23′ 45″, and longitude 36° 44′ 15″ E., is the south end of the extensive reef just mentioned, connected with Mushabeah Island: it lies S. 34° E. distant 14 miles from the south point of the island, forming a concave curve to the eastward; there are no dangers or soundings to the westward of the reef. Easterly, 9 miles from the point of this reef, lies the island of Shaybarah, which is a low, sandy, and coral island, having numerous bushes on it; the length of it from N.W. to S.E. is about 6 miles, and 3 miles broad. Between this island and the south

point of the reef just mentioned is a broad channel which leads into a gap among the inner reefs; from thence among the reefs to the northward. This channel is used by all the native boats, but is much too narrow and dangerous for a ship, although the Honourable Company's surveying brig *Palinurus* passed through it twice. There is good anchorage throughout this channel.

Mushabeah Island, (the northern and western end in latitude 25° 40′ N., and longitude 36° 33′ E.,) is a low and level coral island from 18 to 20 feet high, 4½ miles in length, north-west and south-east, and 1½ mile broad; its western side is quite steep, having no soundings at 120 fathoms close to the cliffs; there are no dangers to the westward of it. The reef extending off the south end has a gap in it, distant about 2 miles from the island. In this gap of the reef a vessel may anchor, but the bottom is very foul. From the N.W. end of Mushabeah N. 16° E. to latitude 25° 53′½ N., which is the latitude of the northern isle of this group, a low coral island with excellent anchorage close to the southward of it, is called Sheikh Murbut: it contains the remains of a Musselman saint of that name, deposited in a now ruinous tomb. This island or anchorage is safe to approach; a bank of soundings from 50 to 30 fathoms extends to the westward of it five or six miles, as well as 12 and 13 miles to the N.N.W., joining the rocky or broken cliff island of Murdounah. Mushabeah Island. Sheikh Murbut.

Cape Ghurkoomah is the nearest point of the main land, situated 4 or 5 miles E.S.E. from Sheikh Murbat; it is 400 feet high, and the Cape gradually rises in the centre. Ras Ghurkoomah.

From Sheikh Murbat Island, the next island is Murdounah, about 150 or 200 feet high, in broken coral cliffs; it is about ⅞ of a mile long, N.N.W. and S.S.E., in some places only 100 or 50 feet wide; it lies in latitude 26° 4′ N., and Murdounah Island.

longitude 36° 33′ E., or north from Mushabeah. A bank of sandy soundings extends to the S.S.W. of the island 7 miles, but not far to the westward. Anchorage close to a reef off its south end affords shelter from N.W. winds; but better anchorage is obtained by proceeding to the main land, which lies five miles to the eastward, forming a point; close to the northward of which is Sherm Abban, a fine bay, and good anchorage. The land from this point runs to the eastward, four or five miles, and affords good shelter and anchorage from N.W. winds; the soundings are from 30 to 15 fathoms near the shore, which is low and sandy; the beach in some parts is pointed by low coral cliffs. Excellent water and sheep in plenty, also fire-wood may be obtained at this or the former anchorage: the Bedouin Arabs supply the articles at a cheap rate; water at about 200 gallons for a dollar; sheep are one, and one and a half dollars each. From this anchorage the land forms a bay to the southward, in the centre of which there is a large reef, and soundings all about it, from 25 to 10 fathoms. There is a safe passage between Murdounah Island and the main, which leads up to the port and harbour of Wedge, or Ul Waish.

Good Anchorage.

Supplies.

Riackah Island. N. 40° W. from Murdounah, distant nine miles, is the Island of Riackah; this island rises gradually from its south end to about fifty feet, in the middle and north end. An extensive reef and patches extend to the southward, to within two miles of Murdounah Island. There are no dangers to the north westward of Riackah Island, which is safe to approach, should a ship wish to get into the port of Wedge.

Sherm Wedge. SHERM WEDGE, or port of that name, is a small bay on the coast, capable of affording good anchorage in 3½ to 6 fathoms, for a small or middle-sized ship: the bay forms

three sides of a square; the entrance 250 yards broad. A ship ought to anchor close inside the northern point, as the water is shoaler a little way up the bay; she will then be just clear of the N.W. swell, which rolls across the entrance; the ground is stiff clay. This place is easy of ingress and egress, and no dangers lie out to seaward; the island of Riackah, lying to the W.S.W. 5½ miles, may be boldly approached, and it will lead a ship into Wedge. The coast about Wedge is coral cliffs about 50 to 70 feet high; the port is not easily distinguished till close to it. It lies in lat. 26° 13′ N., and long. 36° 32′ E., or 2° 10′ east of Cosire, by numerous chronometric measurements. Anchorage.

Wedge affords a good and cheap supply of excellent water, obtained from the Bedouins, who charge one-twentieth part of a dollar for two skins, containing about five gallons each skin, or about 200 gallons per dollar. They can supply 2,000 gallons a-day, brought from some wells distant six miles inland, where there is a Turkish garrison of 25 men, in a small fort used as a depôt for grain required by the caravans going to Mecca. Sheep may be obtained at one, or one and a-half dollars a-head. Should a large ship require water at Wedge, and not like the anchorage, she may anchor to the southward of the reef extending or connected with the south end of Riackah Island, distant four or five miles from Wedge, at which place boats can be procured to bring water. Anchorage for large Ships to water at.

The Arabs at Wedge are civil, and under the chief of the Billy tribe, named Sheikh Amarah; he generally resides near Wedge, and expects a small present. A number of fishermen also reside here, belonging to that extraordinary race, the Hootaimy, so well described in Lieutenant Welsted's narrative of these seas.

N. 2° W. from Wedge, distant 20½ miles, or in lat.

Jibbel Antar, or Leban.

26° 34′ 18″ N., and long. 36° 33′ E., is a conspicuous mountain called Jibbel Antar, or Jibbel Leban, having on its centre two small peaks, whose summits are 2,500 or 3,000 feet above the level of the sea. This mountain is eight miles from the sea coast, and can be easily and frequently distinguished at sea.

Riackah Island, the centre of which lies in lat. 26° 10′ ¼ N. and long. 36° 26′ 15″, is W.S.W. 5½ miles from Wedge. A line drawn from this, N. 35° W., to lat. 26° 57′ N., clears the western or outer boundary of several patches of reefs, lying in groups, and extending from five to eight miles from the main land, with channels and anchorages among them. No vessel ought to venture inside the line, which runs close to the reefs, unless she may require to anchor, which few navigators, not accustomed to anchor among reefs and sunken rocks, would be bold enough to do, unless they had a native pilot on board. The coast, 11 miles to the N.W. of Wedge, is clear of reefs. Two small low sandy islands, covered with bushes, lie on some of the reefs to the westward; the southern one, Ahwhendear Island, in lat. 26° 36′ N. and long. 36° 10′ 30″ E.; the northern one, Naboogier Island, in lat. 26° 43′ 30″ N., and long. 36° 6′ E. The northern shoal of the group lies, as mentioned formerly, in lat. 26° 57′ N., and due south eight miles from the south end of Namahu Island, or in long. 35° 50′ 30″ E. Between this shoal and the island the coast is clear, and soundings extend a mile off shore, where a ship in moderate weather may anchor.

Ahwhendear Island. Naboogier Island.

From Wedge to Namahu Island the coast has several small indentations, and a number of low hills extend close down to the coral cliffs which line the shore. There are two small bays, called Sherm Antar and Sherm Demerah, to the east and E.N.E. of Ahwhendear Island, distant six

Sherms Antar and Demerah.

and a-half miles. Sherm Demerah, the northern one, is the best anchorage.

Namahu Island is three and a-half miles long, N.N.W. and S.S.E., and one mile broad; is low and sandy at the northern end, rising gradually to the south end to about 400 feet in broken and abrupt lime-stone cliffs and hills: the south end lies in lat. 27° 4′ N. and long. 35° 50′ 30″ E., and is distant from the main land about 1½ miles, forming a safe channel, and affording two safe anchorages, in 6 or 7 fathoms on the east side of the island, in small bays; one to the north and the other near its centre. Abreast the south end of the island there is also anchorage near the main land in 6 and 7 fathoms, under a low woody point; the latter is most convenient for ships taking shelter from strong north-westerly winds. A long reef joins and extends from the N.W. end of the island 4½ miles; there are no soundings near it. The natives on the main are civil, and bring sheep and water; but Europeans ought to be cautious not to go far inland. Namahu Island. Safe Anchorages. Supplies.

From the latitude and longitude of Namahu Island, as mentioned, a line drawn N. 37° 30′ W. to Ioubah Island, in latitude 27° 45′ 30″ N., clears the outer boundary of the reefs off shore. The first group lies between lat. 27° 15′ N. and 27° 18′ N., and 1½ mile to the east of the above-named N.W. line; the second group lies between 27° 25′ 30″ N. and 27° 34′ N, and from 2 to 5 miles east of the line. The next group is about 6 miles in extent N.W. and S.E., and very narrow, in which lie several low coral islands, called the Sillah Islands; they are between the parallels of lat. 27° 37′ N. and 27° 42′ N., lying close to the supposed N.W. line. Between these shoals, and also between them and the shore, the channels are clear; but a ship would Sillah Islands.

do well not to go in-shore of them, as there is no bottom near the coast, and the reefs have no soundings close to their western sides, though with light winds a vessel might anchor among them, with the exception of the Sillah Islands and Reefs.

Moilah. East, distant 12 miles from Sillah Islands, is the village and small fortress of MOILAH, which lies in latitude 27° 40′ N. and longitude, 35° 33′ E.; this is another station as a depôt for grain for Mussulmen pilgrims. A small garrison of Turkish soldiers, under Mohammed Ali Pasha, protects the place: a Bedouin chief being the nominal proprietor of this place, supplies are only to be obtained from him, and his men are not to be trusted. The place affords excellent water and sheep: but the anchorage is unfit either for ships or boats; besides, there are numerous dangers between it and the Sillah Islands. Should a vessel require water, supplies, or shelter, &c., she can run into an inlet called Sherm Yarhour, 4 miles to the S.E. of Moilah; though the entrance is narrow, there is room enough inside, and beautifully sheltered; the approach to it from the westward is open between Sillah Islands and the second group of reefs, as before mentioned. At Yarhour the Bedouins bring fire-wood, water, and sheep, at a moderate price.

Sherm Yarhour.

Supplies.

Sherm Jibber. Sherm Jibber, an inlet in latitude 27° 33′ N. and longitude 35° 37′ 30″ E., affords good anchorage, but the entrance is narrow.

E. 10° S. from the fort of Moilah is a remarkable sharp pointed hill, called Moilah High Peak, 9,000 feet high: it has a very grotesque appearance, and is at the S.E. entrance of an immense range of high mountains, extending to the northward. Moilah High Peak is in latitude 27° 36′ 40″ N. and longitude 35° 50′ E. The mountains hereabouts approach nearer the sea than in general, and the

land between them affords plenty of fire-wood, and grazing for sheep.

Ioubah Island, the north end in latitude 27° 46′ 20″ N., and longitude 35° 13′ E., is 1½ mile in length N.W. and S.E. the north end being a precipitous cliff 300 or 400 feet high, sloping gradually to the S.E. end; there are no soundings or anchorage near this island. Two low small coral islands lie to the east of Ioubah, from 3 to 2 miles; a small reef also, 1 mile S.E. from the south end of Ioubah, another N.N.W. 2½ miles from the north end of the island, having no soundings near them. Ioubah Island.

To the northward of Ioubah about 17 miles, the Arabian coast takes a direction nearly due west, the peninsula of Sinai leaving an opening of 10 miles to the Gulf of Akabah, nearly in the mouth of which gulf lies the high and large island of Tirahn. The coast is fronted by numerous reefs, unfit for anchorage, bounding the coast; and to the southward of it lie in succession from the east, the islands of Burrahghan, Shooshooah, Senaffer, and Tirahn.

Burrahghan, the south end, lies N. 25° W., distant 6¾ miles from the north end of Ioubah, or in lat. 27° 52′ 15″ N. and long. 35° 8′ 30″ E. It is 1½ mile long, greatly indented, with small bays in broken coral cliffs or hills, about 100 feet high. There is good anchorage on sandy bottom close to the S.E. end of the island, well sheltered from N.W. winds; off the N.W. end there are some patches of sunken rocks, but the western and southern sides are safe to approach. Burrahghan Island.

W. by N., 9 miles from Burrahghan, lies the island of Shooshooah, a small island shaped like a quoin, being about 200 feet high, forming a precipitous cliff on the south face, close to which there are no soundings; but on the east side of the island a small reef projects out, off which sound- Shooshooah Island.

ings extend a short distance, on which a vessel, upon an emergency, may anchor in 7 or 8 fathoms, on rocky and sandy ground.*

Senaffer Island. Senaffer is the next island to the west. This is rather a large island of a semicircular form, opening into a fine bay to the southward, in which there is excellent anchorage in 7 or 8 fathoms, sandy bottom; the anchorage is open to southerly winds. Soundings of 15 and 25 fathoms extend to the southward of the island. Numerous broken peaked limestone hills cover the eastern part of the island; the highest one on its S.E. end lies in latitude 27° 54′ 30″ N., and longitude 34° 48′ 30″ E.

Tirahn Island. Tirahn, the largest island in this part of the sea, is 7 or 8 miles in extent; on its southern part, near the centre, is a high peak about 700 feet high, which lies in latitude 27° 55′ 15″ N., and longitude 34° 39′ E. The east end of Tirahn and the west end of Senaffer are 2 miles distant; between which there is a passage, but there is a small shoal in the centre. Close off the south and west sides of Tirahn are no soundings; the west side is distant from the peninsula of Sinai 4 miles, but the passage into the sea of Akabah is only 1 mile broad, as the reefs from Tirahn extend nearly across to the main land, leaving a narrow and deep channel, called the Strait of Tirahn, through which the wind and swell comes down with great violence.

From the high peak of Tirahn S. 67° W. distant 14 miles, on the peninsula of Sinai, are two small bays, lying close together, affording indifferent anchorage for ships.

Sherm ul Moyah. The northern one, called Sherm ul Moyah (from having a well of water near the beach), is the best anchorage. The entrance is narrow, and nearly blocked up with rocks, close to which, just at the entrance of the bay, a vessel may

* Here the "*Palinurus*" rode out a hard gale from the N. N. E., with four anchors down.

anchor in 6 or 7 fathoms in safety; and should it blow from the southward, she may warp into the bay, passing the rocks, when she will be completely land-locked. The water at the well is a little brackish, but would answer for stock or cooking.

The other bay, called Sherm Sheikh (from having the tomb of a Sheikh on the beach), is more capacious and entrance larger; but the water being so deep, bottom cannot be found at 40 and 50 fathoms, till you are within 300 yards from the beach in the bay, when there are from 15 to 8 fathoms, sandy bottom. The coast outside these bays is a precipitous cliff, having no soundings near the shore. Here also the winds meet, when it is blowing hard from N.N.W. out of the Gulf of Suez, and N.N.E. out of the Gulf of Akabah, coming in gusts and changing in a few seconds, from both quarters. Still a vessel, with a little perseverance, can easily get to anchor, keeping well to windward, and then running along shore. From these harbours the Bedouin Arabs of Toor are always on the look-out, eager and happy to convey letters or passengers from here to Suez or Cairo. They are civil and attentive, and may be freely trusted; in four days they take letters to Suez. Between these harbours and Ras Mahommed, distant 8 or 9 miles to the S.S.W., there is no anchorage on the coast; the hills come close to the sea and present a grand range of mountains, extending to the N.N.E. and N.N.W., from 8 to 9,000 feet high.

Sherm Sheikh.

Meeting of the winds.

The Straits *of* Jubal, *and* Gulf *of* Suez.

The Straits of Jubal I shall name as extending from Ras Mahommed to Toor Harbour, on the Arabian side; and from the Island of Shadwan to the peninsula of Zeitee, on the other.

Straits of Jubal.

The principal parts on the Arabian side are Ras Mahommed; Shab Mahmoud, a reef; Shab Ally, a reef, and the dangers off the coast to the northward of Shab Ally. On the Egyptian side, the island of Shadwan, the Seaoul or Clive Islands, and reefs to the east of them; Jubal Island, Gaysoom, or Fair Island, Ushruffee Islands, and reefs to the east and N.W., and the peninsula and high land of Zeitee. In the Straits of Jubal are regular tides; also in the sea of Suez, strong enough, when contrary, to prevent a ship from working to windward.

Ras Mahommed.

Ras Mahommed*, the extreme point, in lat. 27° 43′ N. and long. 34° 20′ 30″ E., is an abrupt broken cliff, with a flat top: it is about 90 feet high, and decreases in height to a low sandy plain, a little to the northward of the Cape; in the centre of which stands a remarkable black hillock about 150 feet high, and has a large pile of stones on its top, erected by the crew of the Honourable Company's surveying vessel *Palinurus*. This hill lies 2½ miles to the N.W. of the Cape, and is in latitude 27° 45′ 30″ N., and longitude 34° 18′ E.; it is the best guide at night to clear a ship of the south point of Shab Mahmoud, as well as to point out the large anchorage between Shab Mahmoud and the reefs extending to the west of Ras Mahommed. Close to the S.W. point of Ras Mahommed there is a low coral island, connected to the Cape by a reef. To the west of the Cape, 4½ miles, a reef extends off shore with no soundings close to it or Ras Mahommed; in one part of the reef extending to the west, there is a break, having a sandy bottom of 6 and 7 fathoms, but so full of sunken rocks, that few vessels would attempt anchoring there. Do not approach Ras Mahommed too near in the night, as the white cliffs and land are not easily seen, but the black hillock is perfecly distinct.

Anchorage.

* Rise and fall 5 feet; high water full and change 6 hours. Var. 9° 48′ W.

Shab Mahmoud, south point, is W. 10° S. from the extreme point of Ras Mahommed, distant 7½ miles, and E. 10° N., distant 17 miles from the high part or centre of Jubal, N. 52° E. distant 6¼ miles from the black hillock on Ras Mahommed, and N. 21° E. distant 14 miles from the south and high part of Shadwan. On this extreme of the shoal there is a beacon rock 3 or 4 feet above water; there are no soundings near the south or west sides of this shoal, but good anchorage on sandy bottom in 18 and 10 fathoms, to the N.E. and E.N.E. of the beacon rock. Soundings extend to the N.N.E. from this rock and shoal to the reef off Ras Mahommed, having an opening of two miles. This is excellent anchorage in N.W. winds, and can be easily made at night, by attending to the bearings given for the point of the shoal, or beacon rock, keeping the black hillock bearing N. 48° E. and extreme point of Ras Mahommed, when you anchor nearly east, or a little to the southward of east. Should the night appear unfavourable for passing through the Straits, a ship may anchor here, and on no account attempt to work through, if the island of Jubal cannot be seen. In light variable winds a vessel gets through the Straits with less difficulty than in strong N.W. winds. Shab Mahmoud, from the beacon rock, extends N. 38° W., 6 miles in length, making a slight curve to the westward of this bearing; there is a channel between Shab Mahmoud and the reefs off the main, but the northern entrance is too intricate, except with a fair wind, for ships to pass through. The reefs off the main land to the northward of Shab Mahmoud lie about 3 miles from the shore, and N. 55° W. from the beacon rock, distant 12 miles, brings you to the entrance of the channel between Shab Ally and the main, in which there is good anchorage.

Shab Mahmoud.

Beacon Rock on Shab Mahmoud.

Good Anchorage.

Intricate Channel.

Good Anchorage.

If to the northward of the beacon rock, and standing

towards the north end of Shab Mahmoud, the southern high part of Shadwan ought not to be brought to the west of south; you will then be 1½ mile from the shoal, taking care not to bring the black hillock to the south of E. ½ S.

Shab Ally.

Shab Ally, an extensive shoal, whose western boundary lies in the middle of the Straits, and contracts the channel to 6½ miles; the southern point, which is broken into several small reefs, lies W. 21° N., distant 13 miles from the beacon rock, and from Jubal Peak N. 24° E. 8¾ miles, the black hillock bearing E. ½ S.: the west side lies N. 27° W. from the southern high part of Shadwan, and the N.W. and north end due north from Jubal, distant 13 and 16½ miles. A line drawn through these points will give the north, south and west extremes of this shoal. Under the south point good anchorage in 15 or 20 fathoms is obtained; also between it and the reef off the main land, which here forms the entrance of a good channel, 3 miles broad. When in a fair way to enter this channel from the southward, Jubal ought to bear from S. 35° W. to S. 45° W., and Shadwan S. 12° E. This channel may be safely used in the daytime, as it affords good anchorage ground throughout, and the water is smooth; the northern entrance is also capacious, but a good look-out must be kept when approaching the reef.

Good Anchorage.

To the northward of Shab Ally the Straits widen 10 miles; still off the Arabian shore there are some dangerous reefs and patches, extending 3 miles from the coast, which is here a low sandy desert. On approaching this shore reef keep the lead going; should a ship decrease her water to 25, 15 and 10 fathoms, she ought to tack immediately. Jubal, bearing S. 18° E., leads clear of these dangers to latitude 28° 9′ N.; you are then abreast of a bay on the Toor

side called Sheikh Ryah, so named from the tomb of a Sheikh. This anchorage is 5½ miles to the S.S.E. of Toor, and affords excellent shelter for ships; there is a patch of rocks on entering the bay, which can be easily avoided; you anchor in 7 or 8 fathoms sandy bottom. These are all the dangers on the east side of the straits. Sheikh Ryah.

Shadwan, and the channel to the west of it, a large high island about 700 feet high, with precipitous sides, is 7 miles in extent, N.W. and S.E.; the southern high part lies in lat. 27° 28′ N., and long. 34° 6′ 30″ E. There are no soundings on its east, south, and S.W. sides; on its western side, fronting the Egyptian shore, and near the N.W. there is a low sandy point, extending a considerable distance to the westward: soundings from 8 to 10 fathoms extend from this point to the southward, and towards the island. This is excellent anchorage in N.W. winds, but care must be taken to avoid a very small sunken rock, nearly in the middle of the bay; this rock can be seen if a good look-out is kept, having only 2 or 3 feet water on it. This anchorage will answer very well for a vessel making the straits in blowing weather, as you may work up under the lee of Shadwan, in quite smooth water; the winds are sometimes very baffling under its lee, more especially when it blows from the N.W., in the straits. The distance between the western side of Shadwan to the reefs off the Egyptian shore is 5 or 6 miles, having no soundings near the channel. With the south part of Shadwan bearing E. 24° N., distant 8 miles, there is a large shoal, nearly 2 miles in extent, having no soundings on its east side; to the N.W. of this shoal, 3 miles, there are others, off which, and in the space between them, there are 10 and 25 fathoms. A small island of coral cliffs, called Gumarah, lies 3 miles to the S.E. of the large shoal as before mentioned; it has Shadwan Island. Excellent Anchorage. Gumarah Island.

no soundings near it, and bears from Shadwan, high part, S. 42° W., distant 9 miles. S. 32° E., distant 1¼ and 3 miles from Gumarah, are two small shoals, with no soundings to the east of them; these are all the dangers in the channel to the west of Shadwan. After anchoring at Shadwan, a ship may proceed through the northern channel, where there is smooth water, into the Straits of Jubal.

Northern channel from Shadwan anchorage.

This channel lies between the north end of the Shadwan and the several islands formerly called the Clive Islands, which lie 4 or 5 miles to the N.W. of Shadwan. A reef extends off the N.W. end of Shadwan ¾ of a mile, between which and the Seaoul Islands there is a small reef in midchannel. Due north from Shadwan, N.W. point, distant between 2 and 3 miles, is a small but dangerous reef; there are no soundings on the east and north sides of this reef, but there are 10 and 12 fathoms a little distance from the S.E. side, where a vessel might anchor upon an occasion: the high part of Jubal bears from this reef W. 33° N., distant 7 miles; the southern or high part of Shadwan, S. 42° E.

The Seaoul Islands.

The Seaoul Islands are small: low coral islands: the eastern one, the largest, surrounded by a reef, having no soundings near it; the other two islands lie 1½ mile to the west of the other: they are three small broken coral cliffs, and are situated on the northern part of an extensive reef, off the south side of which there is anchorage on a sandy bottom. Care must be taken not to approach this reef too close, as there are numerous coral rocks detached from it, but can be easily seen. In this channel a N.W. wind will carry a ship into the Straits of Jubal, passing close to the reefs off the Seaoul Islands, between them and the reef as mentioned, off the north end of Shadwan. In hauling up to the N.W. you pass close to a large horse-

Anchorage.

Shadwan Anchorage to the Straits of Jubal.

shoe shaped reef which lies about a mile and a-half to the north of the east Seaoul Island. These are the only dangers between Shadwan and Jubal, and in working in the large straits near these two islands, a bearing of Shadwan is the best guide; with it bearing S. 42° E., or Jubal W. 24° N. This bearing of Shadwan, south part, touches the whole of the dangers on the west side of the Straits of Jubal, including Jubal, the Ushruffee Islands, and up to the high land of Zeitee.

Working in the Straits of Jubal.

Jubal Island, the centre or high part of which is in lat. 27° 37′ 40 N., and long. 33° 53′ 15″ E., is moderately elevated in the centre, and of a circular form, being about two and a-half miles in diameter; the eastern side is steep, having no soundings near it at a depth of 30 and 40 fathoms. On its S.S.W. side, two low coral islands nearly join, being connected with it by a reef. On hauling round the south end of Jubal, good anchorage is to be found between it and the reef off the low coral islands in 7 or 8 fathoms, sandy bottom, distant about ¼ of a mile from Jubal, with the high part bearing north; this is excellent anchorage in S.W. winds, and from which a vessel can easily proceed again into the straits, and make the anchorage under Shab Ally. From one to four miles to the N.N.W. of Jubal are three low coral islands connected to it by a reef, in which they are situated; the largest one, being near Jubal forms a small bay with the north end of Jubal, in which there are soundings of 25 and 35 fathoms; it would not answer as an anchorage.

Jubal Island.

Excellent Anchorage under Jubal.

West 2 miles from the north end of the shoal off Jubal, is the north end of Gaysoom Island, called Fair Island in the old charts; the north end of this island is a little elevated, having a small brown hillock on its extreme point, which bears from Jubal N. 48° W., distant 5¼ miles. This is

Gaysoom Island.

the entrance of a deep bay, between Jubal and Gaysoom, in which there are soundings from 25 to 38 fathoms, with good anchorage, close under the south end of Gaysoom.

Inconvenient Anchorage.

The disadvantage of this anchorage is, that a ship runs so far to leeward before she obtains shelter from the N.W. swell, and loses time in beating back again through the channel.

Gaysoom, from its north point, extends to the S.W. about 3½ miles, where it is nearly joined by another low coral island, extending to the N.W. about 3 miles; the north point of this lies W. 12° N. from the brown hillock on Gaysoom, distant 3½ miles, between which it forms a bay, with soundings of 25 and 30 fathoms. Although the entrance to this bay is 1 mile broad, the N.W. swell comes in from Zeitee and renders it unsafe anchorage; the northern side of the channel is bounded by the south point of the reef, extending to the southward of the Ushruffee Islands.

Ushruffee Islands.

The Ushruffee Islands are groups of low coral islands, scattered on an extensive reef, which bounds the west side of the channel, in the Straits of Jubal; the north end of these islands and reefs extend N. 39° W., distant 14 miles from the centre of Jubal. To the east of the Ushruffee Islands, distant 1 mile, are two small and dangerous reefs, connected with each other, but leaving a channel between them and the island. There is also indifferent anchorage under the lee of them, and soundings of 10 and 12 fathoms extend a little to the eastward of them, but they are no guide for a ship nearing them at night. They bear from Jubal N. 31° W., distant 8½ and 11 miles, and to clear them at night a ship ought not to bring Jubal more to the east than S.S.E., till the south end of the high land of Zeitee bears west, or the centre of the high land of Zeitee on with Mount Agrib bearing W.

Two dangerous reefs.

23° N. This bearing just touches the northern end of the dangers off the Ushruffee Islands, and is also a mark for the south end of Shab Ally. There are soundings of 17, 20, and 35 fathoms to the N.E. and north of the Ushruffee Islands and reefs, distant 1 or 2 miles from the dangers, the northern point being a detached reef which lies to the N.W. and W. of the islands, and extends, as beforementioned, N. 39° W., distant 14 miles from the Peak of Jubal. This is the northern danger on the west side of the straits, and on which the Indian ship *Samdang* was wrecked in 1831, proceeding to the southward through the straits at night with a fair wind: here the N.W. swell breaks with great violence.

Between this reef and the high land of Zeitee there is a fine bay, with soundings on mud in 17 and 20 fathoms, but the N.W. swell rolls into it; yet anchorage in smooth water may be found in its north-eastern part, close under a low sandy island and reef extending a little way from a projecting point of Zeitee, called Petroleum Point, from having some petroleum wells about 1 mile to the N.W. of the point, and close to the beach. This point bears from the reef off the Ushruffee Islands W. 29° N., about 3 miles. The south point of Zeitee is quite low, and nearly joined by a low coral island, to the southward of which, 2 miles, extends a reef, having a good channel between it and the reef off Gaysoom, or Fisherman's Islands, which leads into the Bay of Zeitee, a deep bight, running up to the N.W., distant 5 miles. In this bay, or at its entrance, a ship may anchor, if she is very desirous of obtaining wood, with which the Egyptian coast abounds in the Bay of Zeitee; and, strange to say, Suez is partly supplied from this place by boats: the wood is all dry.

Good Anchorage.

Petroleum Point and wells.

Zeitee Bay or Inlet; good anchorage.

From Petroleum Point the coast is safe to approach,

close to the high land of Zeitee, having 30 or 40 fathoms close to the beach or rocky shore.

Toor Harbour. Toor Harbour, the peninsula of Sinai, is in lat. 28° 14′ N., and long. 33° 41′ 30″ E. This harbour is so well described in Horsburgh's valuable Directory, that it needs no other; the water here is excellent and in plenty. This is the nearest point fromw hich a traveller can proceed to Mount Sinai; the journey is performed on camels, and generally takes two days; the road for the most part is execrable, winding the greater part of the way through broken and precipitous ravines of the rocky mountains. In a valley, at the foot of Mount Sinai, there is a large Greek monastery, where travellers are entertained with the utmost hospitality and good-will; it is inhabited by twenty-five or thirty Greek and Russian monks of the Greek church; they live in a state of celibacy, and never eat animal food.

Mount Sinai. Mount Sinai is 3,000 feet above the monastery: by observations on the top of the mountain, with an artificial horizon, it is in lat. 28° 31′ N., and long. 34° 5′ E. None of the Sea of Suez, except a very small portion about Hummum Bluff, can be seen from Mount Sinai; Toor, and all the coast of Egypt, being hid by Mount St. Catherine, which is a few hundred feet higher than Sinai, and lies 2 miles to the westward of it.

The Islands Tirahn, Senaffer, Shooshooah, and entrance of the Sea of Akabah also, some distance up, can be seen distinctly, as well as the high mountains about Moilah, by which we fixed the station of the mount, taking angles with the theodolite.

From Toor to Cairo the Bedouins will convey letters or passengers in from three to five days; however, boats from Jiddah wishing to communicate speedily with Cairo, generally land their passengers or letters at a place called

Sherm Sheikhdele on the N.E. side of Ras Mahommed, mentioned in a former part of these directions; by doing this they avoid the strong N.W. winds in the Sea of Suez. About 1½ miles from Toor, at the foot of some low hills, is a square building or tower, at the foot of a large date grove, which belongs to the convent of Mount Sinai: this grove of dates is watered by a large and clear spring of bitter and brackish water, which lies close at the back of the garden walls near the hills, and makes an excellent warm bath, its temperature about 95°, with a small building enclosing it. Date Grove.

Abreast of Toor the sea is 17 miles broad. There is an extensive spot of shoal water in midway, on which there is not less than 6 or 7 fathoms, and on each side of it 26 or 30 fathoms, sometimes 35 and 40 fathoms, which is the general depth in the centre of the Sea of Suez.

W. 29° S. from Toor, distant 17 miles, and on the Egyptian side, is a small point, extending a little to the eastward of the line of coast, between which and the northern end of the high land of Zeitee is formed a small bay, in which a vessel may anchor in 7 or 5 fathoms sandy bottom, a little sheltered from N.W. winds; Mount Agrib bears from the anchorage W. 4° N., distant 23¾ miles. The soundings gradually decrease as you approach the shore, taking care not to go too close to the Spit of Reef, which extends about 1½ mile to the eastward of the point; the point is called Ras Shukhair, and lies in lat. 28° 5′ 30″ N. and long. 23° 33′ E. Anchorage.

From Ras Shukhair the Egyptian coast lies in a direction N. 34° 30′ W. to lat. 29° 00′ N., preserving nearly a straight line, with a few small bays to the westward.

Along the coast so far mentioned the soundings decrease as you approach the shore, but on no account stand within

20 fathoms at night: even at that depth, if a vessel is going fast through the water, she may be on shore before another cast of the lead is taken; a navigator ought, therefore, to be on his guard, and measure his distance from shore to shore. The native pilots are excellent in judging their distance from shore, and when to tack of a dark night. I think they may be implicitly trusted in the navigation of the Gulf of Suez; and that a commander of a ship has little else to do than see his ship properly worked. The Arab pilots have so long and often been accustomed to work up and down the sea, that they may be expected to have a thorough knowledge of its localities.

Native Pilots may be trusted.

Mount Agrib.

Mount Agrib, or Aggarrib, is the most conspicuous mountain on entering the Gulf of Suez; it has a high conical shape, and stands pre-eminent among a lofty range on the Egyptian coast. It can be seen one hundred miles distant, is about ten thousand feet high, and lies in lat. 28° 6′ 45″ N., and long. 32° 57′ E.

From Toor Harbour the Arabian side takes a direction N. 48° W., distance 30 miles, to the dangerous reef a few miles N.W. of Great Jehan Peak, called Shab Khoswan, in lat. 28° 34′ 30″ N. To the east of this line the coast has a few small bays, affording indifferent anchorages, one under Great Jehan Peak, the other about 6 miles above Toor, near a few withered and blighted date trees; but they are both bad spots for anchoring, the water being deep, little sheltered, and close to the shore. At the latter place are those famous 'written mountains,' one of which produces musical sounds, a source of superstition to the natives. From Toor to Jehan an extensive range of hills comes close down to the sea, and the shore is bold to approach, till you get to the northward of Jehan Peaks, which are two pointed hills. The Great Jehan, which is the

Shab Khoswan.

Indifferent Anchorages.

highest and northern one, is in lat. 28° 32′ 30″ N., and long. 33° 20′ 30″ E.; it bears from Mount Agrib N. 38° E. There is a lagoon of some extent between Jehan and Shab Khoswan.

Shab Khoswan, a dangerous reef, dry at times, lies 2 miles off Ras Sherateeb, a low sandy point, to which it is connected by shallow water, having a passage only for boats; it bears from Great Jehan Peak N. 65° W. 6 miles; there is a good anchorage under its south-east end, in 6 and 7 fathoms. Care should be taken not to stand too close in, as the water shoals suddenly. This danger ought to be avoided at night, by keeping well over on the Egyptian coast; there are 12 and 15 fathoms at half-a-mile to the westward of the shoal. Ras Sherateeb.

W.S.W. from Shab Khoswan the Egyptian coast is 11 miles distant.

From Shab Khoswan the coast extends due north 18 miles to Ras Burdess, under which point there is anchorage. Ras Burdess Anchorage.

Ras Burdess is a low sandy and bushy point, in lat. 28° 52′ N.; the coast forms a slight bay to the eastward, between Burdess and Sherateeb to the southward, with soundings of 10 and 15 fathoms near the shore. The next place of anchorage is Ras Selima, or Zelima, 14 miles to the N.N.W. of Burdess. Ras Burdess.

Ras Zelima is a low sandy point close to the hills, which here again extend to the beach; this anchorage is well sheltered from north-west winds. W.S.W. from Ras Zelima the Egyptian coast is 21 miles distant. Ras Zelima. Anchorage.

Ras Hummum, or Gad Mallap, is the next cape; it is a low sandy point, in lat. 29° 14′ N., off which, about 3 miles to the westward, is shoal water. There is a good anchorage on the south side of this cape; a large, high hill, called Hummum Bluff, lies close to the shore: it is in lat. 29° Ras Hummum or Gad Mallap.

11′ N., and long. 33° 4′ E. Mount Agrib bears nearly due south from the extreme point of the cape.

Hummum Bluff.

Hummum Bluff is 1,500 feet high, and shews a precipitous cliff nearly overhanging the beach; at the foot of this hill there is a hot salt spring, and two hot caverns, called Hummum ul Faroun (the baths of Pharoah). The Hon. Company's surveying vessel *Palinurus*, while at anchor off Hummum Bluff, sheltered from the north-west; the wind suddenly shifted to the southward, and blew a hard gale, which she rode out with three anchors a-head, topsail yards and topmasts down, and not a cable's length from the shore; her tender was driven on shore, and was a total wreck in a few hours. This will shew how necessary it is, when anchoring from north-west winds, not to hug the shore too close, in case of a shift of wind, which is very sudden, at times unexpected.

Zafarana Point.

To the W.S.W. of Ras Hummum 14½ miles, and on the western shore, is Zafarana Point, in lat. 29° 6′ 30″ N.: there is a bank of sand extending to the east, about 1½ mile from this cape, which has 10 and 12 fathoms close to its outer edge; some small hillocks are near this cape. Ships ought to be cautious at night in working between the reef off Hummum Bluff Cape and Zafarana, the distance across being only 10 miles; when Hummum Bluff bears E. 15° S. it is on with the shoalest and most extensive part of the reef off Hummum Bluff Cape.

Good Anchorage.

A mile or two to the southward of Zafarana Cape there is a deep bay, in the northern part of which a ship may anchor in 6 or 7 fathoms, with Hummum Bluff bearing E. 22° N., well sheltered from north-west winds by the shoal water off Zafarana. A range of high hills lie a few miles to the west of Zafarana, which terminate abruptly a few miles to the northward, between which and the high land

of Abooderage, further to the northward, there is a long flat desert or valley between the mountains. It was at this spot, say the Arabs, that the Israelites passed over the sea, which is here 12 miles broad.

From Zafarana Point the western shore has a direction N. by W. 16 miles to Ras Abooderage, in lat. 29° 20′ 30″ N. with soundings close to the shore of 10, 12, and 15 fathoms.

Ras Metamer is a low sandy point and spit on the eastern shore, in lat. 29° 26′ N.; there is good anchorage to the southward of this cape in 11 or 12 fathoms sand. Ras Metamer bears from Hummum Bluff N. 42° 30′ W., and from Jibbel Sedour; or Barn Hill (a capacious hill on an elevated range, in 29° 40′ 30″ N., and long. 33° 3′) E. S. 43° W. The sea abreast of Metamer becomes contracted to 9 miles, between the southern end of the high land, or cape of Abooderage, and Metamer. Ras Metamer.

From Metamer to Suez the shore is bounded by a coral reef, which extends in some places from ½ to 1 mile from the land. Caution is requisite in approaching the shore at night, as the coast is low and deceitful as to the distance; from 20 fathoms in some places is close to the shore.

On the western side from Ras Abooderage, in lat. 29° 20′ 30″ N., forms a deep bay, in a direction N. 42° W. 20 miles, then N. 30° E. 20 miles, into the entrance of the Bay of Suez. The southern point of Abooderage Bay is bounded by the high hills of Abooderage, which come close to the sea, and are bold and safe to approach, having 30 fathoms close to the beach. In the northern part of this bay water is more shoal, and affords good anchorage from north-west winds. Adoga Point is the north entrance of the bay, and runs out a considerable distance, forming a low point not seen till very close to it.

Ras Sedour.

Ras Sedour, a low sandy cape on the eastern side, is in lat. 29° 36′ N., a small sandy spit runs off the cape; there is good anchorage on its southern side, in 12 and 15 fathoms sand. On the northern side of this cape there are two small reefs, about 1½ mile from the shore, and 3 miles from the cape.

Ras Mesalle.

Ras Mesalle is the next cape on the eastern shore; it lies in lat. 29° 49′ N. Two miles to the southward of this cape a narrow spit of sand extends off shore to the S.W. There is a good anchorage on any part of the coast between Ras Sedour and Ras Mesalle in 14 or 15 fathoms water; between Ras Mesalle and the opposite shore, and near point Adaga, is only 6 miles, having 15 and 20 fathoms in mid-channel. Care should be taken on approaching Adaga Point, as a spit of sand extends off it, between 2 and 3 miles to the north-east.

Gad ul Marakab.

Gad ul Marakab is the south point of the harbour of Suez: a spit of sand extends out to the west of it half-a-mile. Upon the eastern shore, and on the northern side of this point, is a deep bay of shoal water, with a channel up to the town for buggalows and small craft: the town is situated on a low point of land on the west side of a small creek full of islets and shoal water, where the buggalows, or native boats, anchor.

To the southward of Gad ul Marakab, and one mile from the shore, there is a patch of sunken rocks, dry at low water. In the centre of the bay is a small reef, bearing from the white tomb in the town S. 23° W., and from Gad ul Marakab W. 20° S.; in the bight, to the northward of the low point of Adaga, on the western shore, there are four patches of rock, the outermost one being about 1½ mile from the shore; the soundings are pretty regular, 10 and 11 fathoms on the western side, shoaling gradually to

4 and 3½ fathoms as you approach the flats of the town. The best place for a vessel to anchor is with the white tomb bearing N. 7° E., and Gad ul Marakab S. 53° E., in 4 or 5 fathoms; she will then be off the mouth of the channel leading up to the town of Suez.

Suez town is in lat. 29° 58′ 00″ N., and longitude, by means of many observations with four good chronometers, 32° 38′ 30″ E. The lunar observations making the longitude 32° 39′ 30″ E., a difference of 1 mile only. Variation at Suez in 1830 was 9° 20′ W. Suez.

Provisions are plentiful and good; in the seasons various fruit, such as oranges, pears, apples, and plums, also plenty of fine cabbages, lettuces, &c. The natives are civil and friendly to Europeans.

Description of, and DIRECTIONS *for, the* COAST *of* ABYSSINIA, *from* RAS BILLOOL *to* RAS HURUB, *and thence to* COOBACH.

The islands and rocks lying to the northward and eastward of Ras Billool have already been described, page 9. From Ras Billool 34 miles, N. 36° W., is Ruckma Island; the soundings between, all along the coast, are regular, gradually increasing from it, and without any dangers to the chain of islands off it, above-mentioned. The coast runs sharp round to the west of Ruckma Island, forming a cape bearing that name. The island itself is situated on the coast reef, with an anchorage in a bight to the southward of it, where there are 4 and 5 fathoms. To enter this anchorage, keep the island on board, in order to avoid a projecting part of the reef off the coast, to the S.E. of it: this anchorage is well sheltered from N.W. winds, and the

reef south and S.E. of it most probably affords shelter from the south winds, but not so good as to the north of Ras Ruckma, where there is good anchorage in moderate depths.

There is a high island on the coast reef, 3 miles to the west of Ruckma, and to the south of it a bight in the coast, running in to the south, in which are two wells, the nearest being brackish and the other better, and a moderate supply may be obtained. There is neither village nor huts.

To the north and west of Ras Ruckma are six high white rocky islands. The three northernmost are near each other, and the southernmost of these, called White Quoin Hill, is 5 miles from the cape, and has a rock a-wash 1 mile S.W. of it. There are regular soundings on either side of this cluster, and a channel inside them. The other three islands lie in the bight of the bay, in a westerly direction, and in a line of 5 fathoms soundings.

The white rocky islands on this coast are so called from the white dung of birds, with which they are generally covered.

Ras Sherayer.

Ras Sherayer is a high, remarkable, brown, volcanic hill, of the barn shape, situated close on the beach, with no other hill near it: it is about 10 miles from Ras Ruckma, and 1½ mile north of it at about a mile from the coast, is a 5-fathom patch, with 12 to 18 fathoms close to it. N. by W., 8 miles from Ras Sherayer, is the easternmost of the Jibbel Abbelat Islands: they are both near the coast, from which they are separated by narrow channels. Between the outer island and the coast are 14 to 17 fathoms, and 17 fathoms between the two islands; but this channel is narrow, in consequence of a reef extending from the easternmost island. The passage between the westernmost island and the main is narrow, and only fit for Dows.

Jibbel Abbelat Islands.

These two islands are of considerable height, and are volcanic, but no remarkable stones were observed on them. At 3½ miles S.E. of the easternmost is Sale Abbelat Island, or the Button Rock. Sale Abbelat Island.

To the west of these islands the coast trends away to the S.W. and South, forming a triangular bight, or small bay, where are regular soundings and good anchorage, protected from southerly winds.

Haycock Hill, so called from its resemblance to one, is situated near the coast, in the S.E. part of this triangular bay; and to the S.W. of the Abbelat Islands, being 4½ miles from the outer one, and is one of the most remarkable hills in their neighbourhood. Haycock Hill.

Basin Hill is 9½ miles west, a little southerly from the Haycock: it is flat at one end, and rises at the other into the shape of an inverted basin. Basin Hill.

Sugar-loaf is nearly 8 miles S.W. of the village of Edd, and is of the haycock shape, as seen from Abbelat Islands; but at Edd it forms an oblong hill. At the latter place, a much more remarkable hill is seen to the south of the Sugar-loaf, of a quoin shape, with a remarkable knob on its south end, by which the former may be known. Sugar-loaf.

Jeseerat Coordarlee is 9 miles W.N.W. of the easternmost Abbelat Island, and 2½ miles off the coast, to which it is connected by a spit of sand and rocks, a reef of which, with 2 and 3 fathoms water on it, surrounds the island. Jeseerat Coordarlee.

Barn Rock is rather high, and is 2 miles E.N.E. ½ E. of the reef of Coordarlee Island, with 12 to 19 fathoms between them. Barn Rock.

Low Rocks are two, S.E. of the reef off Coordarlee Island, with 15 and 20 fathoms between them: they are 8 or 10 feet above water, and the surf breaks over them in a breeze. Low Rocks.

From Coordarlee Island the coast trends away to the westward, and then to the northward, forming an elbow at Edd, where there is a bight running in to the south, 1¼ mile in depth and breadth; and there is a similar, but smaller bight, 3 miles east of the town, forming a square and rocky cape between them, with regular soundings off it. The soundings are also regular in a bight west of the cape; but there are only 3 fathoms in the outer part of it, and 2 and 1 farther in. The soundings increase very regularly from the cape off shore.

Edd Village.

The village of Edd is situated upon the sandy plain in the western bight of the coast, and consists principally of oblong huts, with arched tops, and an outer covering of coarse grass mats; it is of no great extent, has a few small boats, and considerable trade with Mocha, in mats, rafters, ghee, and goatskins. The *Benares* anchored to the N.E. of the village, distant about 2 miles, and three quarters of a mile from the nearest land, which forms a square cape, in 5¾ fathoms. Good cattle may be had here, but no water, excepting from some distance, and that is brackish.

Jeseerat Coordomeat.

Jeseerat Coordomeat is a rugged high island, nearly 11 miles north of Edd village, and 2½ miles from the coast. A rocky spit extends from it 2 miles to the west, having a channel of 5 and 9 fathoms between it and the coast. To the S.W. by S. of Coordomeat, distant 2 miles, are three small, but high rocky islands, situated upon one shoal bank, with 5 and 6 fathoms, in a narrow channel between them and the coast; and there are 7 to 14 fathoms between them and Coordomeat. In the rains, good water may be had nearly opposite Coordomeat on the coast, where it forms a waddy.

Ras Seerboot.

Ras Seerboot is 13 miles N. 49° W. from Coordomeat Island. To the N. westward of this cape is the highest of

the near range of hills, with an elevation at each extremity: the highest part is seen from a little above Edd, to a little below Amphilla, and is what Captain Court calls the Barn Hill. Single Peak is a conspicuous hill, to the south of the former. Rugged Peak is 5 miles S.E. by S. of Double Peak, and has a broken irregular top, with a sharp small point on its western part.

N. 35° W., 16 miles from Ras Seerboot, is Ras Cussar; and from thence, 9 miles, N. 47° W., is Ras Ourata; and 9 miles N. 50° W. further, is Ras Shuckhs, off which is a shoal; it commences at Ras Ourata, and extends to 3 miles off Ras Shuckhs, first forming a bight: the western part slopes away more gradually, and terminates at a small island, which is 4 miles east of Durramsus. The north bluff is the most remarkable piece of high ground on the near range of hills, and from it the land gradually slopes away to a point in the N.W. To the north of it is a conspicuous quoin hill, by which it may be known, when midway between Ras Cussar and Ras Ourata.

From Ras Shuckhs the coast trends away about 8 miles, to a small island close in shore, just spoken of, to the west of which, 3½ miles, is Ras Amphilla. Durramsus Island is about a mile to the N.N.W. of Ras Amphilla, with 8 fathoms in the channel between them, which leads to anchorage ground in 6, 7 and 8 fathoms, outside the coast reef; but a spit runs off the S.W. part of Durramsus Island; and to the N.W. of the island, distant 1½ mile, is a shoal, having upon its shoalest part 3 fathoms. Between this shoal and the island, is a channel of 8, 9 and 10 fathoms, leading in to anchorage with Durramsus Island on the east. There is anchorage in a bight in the reef to the W. by S. of Durramsus 2½ miles, about half a mile from shore, with an island on the west; here is

Durramsus Island.

5½ fathoms of water, and Amphilla is about 2 miles to the westward of it.

Amphilla. Amphilla is one of the most wretched places on the coast; the village, which hardly deserves the name, consists of six miserable huts close to the sea, on the verge of a sandy plain, and does not appear capable of furnishing any supplies. The coast line at Amphilla changes from west to N.N.W. forming a bend in the coast, with Ras Amphilla to the south, and Ras Morah on the north. The distance between these two capes is 13 miles, and the coast between them is bounded by a reef with seven low coral and sandy islands upon it. There is no reef off the outer points of either cape, but it lies in a line with the coast, from Ras Amphilla, above 1½ mile from it; and after passing the anchorage in the bight near the village, and the two islands to the west, it extends off shore upwards of 3 miles, then again decreases, and ceases at Ras Morah. Five or six miles to the N.W. of Durramsus Island, and 1½ mile from the coast reef, are two low coral islands, called the Burmat Hadjee Islands, with good soundings on either side.

To the S.S.W. of Amphilla village, on the sandy plain, is a small hill, low in the centre, with a peak at each extremity, called the Paps. The inner and outer hills on Jibbel Morah are little to the south of Ras Morah; the former is a small barren hill, and to the east of it are two or three small peaked hills, the largest and most remarkable of which is the outer hill: the distance between these hills is less than 2 miles.

Beach Hill is 11 miles N. 54° W. from Ras Morah,
Ras Unduddah. and 2 miles further, W.N.W., is Ras Unduddah, the eastern boundary of Howakel Bay; 3 miles to the N.W. of which is Omer Sarridge Island, with good anchorage in 4

to 6 fathoms under its south side, protected from north-west and south winds. The east end of this island is in latitude 15° 5′ N., longitude 40° 34′ E.

Howakel Bay is a large bight in the line of coast, upwards of 30 miles broad, and 15 miles deep, containing many islands and shoal patches, most of the islands being low, and composed of coral and sand: the largest islands are also bordered by coral, and on the highest parts, as well as on the main, mineral specimens are found. Howakel Bay.

Beach Hill forms the eastern extremity of this bay; it is a round double-topped hill, on the south part of Ras Unduddah; and a little to the N.W. of it is a rugged oblong hill, forming the extremity of that cape. Near Hill is to the W.S.W. of Beach Hill, and forms a peak on the near high land. Shore Hill is to the west of the latter, and is a black peak, in the southernmost part of Howakel Bay. Barn Hill is on the western side of Howakel Bay.

Of the islands in this bay, Howakel is the highest and largest of the group, and has a conspicuous peak towards its centre. There is a small village on the island, but no supplies for ships; they procure their water from two wells in the bay. Jibbel Bucker, to the south of the last, forms a high oblong hill, bluff at the extremities. Adjuce Island, to the north of Howakel, is a low coral island, with some trees on it, and there are a few huts, but no supplies: they also procure their water from wells in the bay. Jibbel Sarridge, or Omer Sarridge, is a low coral island with bushes, 5 miles to the N.W. of Beach Hill, and connected with shoal water to the south-eastern part of the bay, as well as to some other low islands to the west of it: its anchorage has been already described. Howakel Island. Jibbel Bucker, and Adjuce Islands. Jibbel Sarridge Island.

To enter Howakel Bay from the eastward, which is the best channel, pass between Howakel and Jibbel Entering Howakel Bay through the East Channel.

Bucker Islands, and two long low islands to the east of them, and edge away to the S.W. along the western side of Bucker Island, passing between it and low islands to the west of it, where the soundings decrease to 4 and 3 fathoms sand, and will afterwards deepen to 5, 6, and 7 fathoms mud, where you may anchor; or if desirous of running farther in, keep a look-out for patches one and two miles off the S.W. part of Bucker Island, which may be passed on either side. The *Benares* left them to the eastward, and anchored in 8 fathoms mud, one mile to the north of a small island, connected to the main in the bottom of the bay, with a high quoin on its south end.

Entering Howakel Bay through the N.W. Channel.

To enter the bay from the N.W. steer in to the coast between Adjuce and a small island N.W. of it, and keep all the islands W.S.W. of Howakel to the eastward, running through between them and the coast reef. There are two small islands in the middle of this channel, which may be passed on either side; and it will, perhaps, be best to pass in to the north of them, to avoid the point of coast reef which runs out and bears south from the outermost of them. Having passed these islands, anchor in 7 or 8 fathoms mud; or if proceeding further in, keep a look-out for shoals, which may be easily seen if the weather is clear lying off the coast, and in the centre of the bay.

On the western side of Howakel Bay, near Barn Hill, is a dry nullah, and two wells of bitter water: there are also a few huts, but no inhabitants seen.

From Adjuce Island to Larmoose Island it is 13 miles N.W. This little island is surrounded by a reef, and is about a mile north of the N.E. point of Hurtow; the coast between it and Howakel Bay forming a bight, with an island in it. Between Larmoose and the main is 10 fa-

thoms water, and about 2 miles to the westward is a rocky patch with 19 fathoms between, and 16 fathoms close without it. N. W., 12 miles from this island, is another, within half a mile of the north point of Hurtow, close to the westward of which is a core running in to the south above 2 miles between the coast reef, with from 7 to 2 fathoms in it. West about 3½ miles from the north point of Hurtow, is an island situated upon the N.W. extremity of the coast reef, with two smaller ones to the southward of it, from whence the coast runs to the S. by W. about 8 miles, and thence to the eastward of south, forming the vast boundary of Goob Ducnoo.

Dissee Island lies about 3 miles to the W.S.W. of the three islands on the coast reef just mentioned, and is one of the pleasantest spots in the Red Sea. It is about 2½ miles in length, N. by W. and S. by E., and about three quarters of a mile broad; the island is high, consisting of a number of similar hills in perpendicular strata, with a few straggling trees: the central part is a plain, covered with grass. The line of coast about here is very irregular, forming many little bights, of which one is just to the north of Dissee Peak, which is on the highest part of the island, where there is a safe anchorage for small boats. In approaching this place, the soundings decrease quickly from 18 to 10 fathoms, pretty close to the shore. Ships should anchor farther off the island between these depths; there are 17 fathoms only half a mile off. The *Benares* anchored with the village bearing west, the centre bay rock just a-wash S. 31° E., distant a quarter of a mile: the ship being a little without the south part of Dissee small bay for boats. Dissee Island.

There are some springs of good water about half a mile from the beach, and the road to them good for roll-

ing casks, but a boat load is as much as can be procured in a day. The village consists of 10 or 12 houses, built of laminated stone. There are plenty of bullocks, sheep, and goats, but the inhabitants are not anxious to sell them.

Dissee Sand-bank and Shoal.

About 6½ miles north of Dissee Island is a small sand-bank, connected to it by a narrow reef; and 2½ miles W.N.W. of the sand-bank is a patch of rocks, with 2 fathoms on it; the outer or western part of it is 3¼ miles from Dissee sand-bank. The soundings at a short distance from Dissee, along the eastern side of the island to the sand-bank, are 24 to 30 fathoms, mud; and they quickly increase to no bottom with 40 and 50 fathoms after passing it.

Of the high land in this neighbourhood, Hurtow Peak, to the N.W. of Howakel, is the highest part of the near main land, seen after passing that island, coming from the southward, and forms a conspicuous peak at Dissee anchorage. Quoin Hill is on the eastern side of Goob Ducnoo, and in Dissee anchorage the south point of the island is a little open of it: this is a sloping piece of land of the quoin shape, with a bluff to the N.W.

Goob Ducnoo.

Goob Ducnoo is formed between the land of Hurtow Peak on the east, and the land of Geedan on the west; and Dissee Island lies in the entrance, with a channel leading in on each side: the eastern one is 1 mile broad in the narrowest part, and the western one is of considerable width. The breadth of the entrance of this core, from shore to shore, is 12 miles; half way up it is little more than 4; it then spreads out again, and is 8¼ miles broad at the bottom, which is on the parallel of Howakel Bay; and its extreme depth is 30 miles. The soundings are 44 fathoms, mud, at the western entrance,

decreasing gradually to 20 fathoms mud, in the lower part, and 16 to 12 fathoms, are pretty close to the shore. Northerly winds blow directly in to it; a vessel would then, perhaps, have some difficulty in getting out. Lord Valentia gave the name of Valentia Island to Dissee Island, and he describes Goob Ducnoo under the name of Ansley Bay. The surprising difference in the fertility of the soil in this place is remarkable, the core being bordered by low land, producing rich pastures, with grass of great length; plenty of cattle, and a great number of large antelopes. There are some ruins on the west coast of the core, occupying much ground, and an extensive burial ground near them, but no inscriptions.

Fresh water may be procured.

Argeego. Argeego, also called Dohono, is situated in a deep bight in the coast, 17 miles to the W.N.W. of Dissee Island, and to the north of the high land of Geedan; it is a miserable-looking place, consisting of huts.

Massowah Island and Town. Massowah Island is situated in the northern extremity of Argeego Bay, about 4 miles north of Argeego; it is separated from the main by a narrow channel, which forms a good anchorage. The island is nearly a parallelogram, half a mile long, and between three and four hundred yards wide, formed principally of coral rocks, of no considerable height, and in great decay. Nearly one-half of the island is occupied by tanks, and a burial ground; and on the inner half is the town, which is crowded with habitations to the water's edge. The most considerable buildings are the mosques, the Doholah's and Banyan's houses, and a few warehouses, which are built of coral rocks: one of the mosques has two domes, and another has a place like a belfry. There is also a stone-built bazaar, where jowari, dates, tobacco, beef, mutton, and fowls, and occasionally fish, are to be procured; and also a few brinjals,

or fruit of the egg plant, and bhindís [bamíyah], but these vegetables are seldom to be had. The trade is entirely carried on by small buggalows, principally to Mocha and Jiddah, but it is not considerable.

Massowah Harbour. In approaching this island, 7 or 8 fathoms will be found close to the reef that extends off it, and 5 and 6 fathoms off the reefs on the north side of the entrance; but the reef extends further off the island, than it does off the north side, where there is a small white mosque. The Anchorage. anchorage lies in a W.S.W. direction, and the soundings in mid-channel are 7 and 8 fathoms, mud; the entrance is 250 yards across, and the broadest part of the harbour 450 yards between the reefs; the anchor should, therefore, be let go in mid-channel.

A light is burnt during the night on the east end of the island, and sometimes also on the jetty. The *Benares* has two or three times run in with north winds, by standing in a little northward of the harbour, and having got close to the coast, run along it to the south in 9 or 10 fathoms, rounding the point at the north side of the entrance, as close as the reef admits, on the east end of which there are 4 fathoms, rocks.

There is no anchorage in this neighbourhood that can at all compare with Massowah, excepting one which is a mile Core Dahaleah. and a quarter north of it, and called Core Dahaleah. This forms an anchorage considerably larger than that of Massowah, the entrance being a quarter of a mile broad, from a rocky spit extending a quarter of a mile to the north from the south side of the harbour, to the reef on the north side The anchorage is nearly a mile north and south, and one mile broad, with soundings of 5 and 6 fathoms, mud. There is a rock above water on the spit, extending off the north side of the entrance, and 6 fathoms close to the shore reefs.

Between the harbours of Massowah and Dahaleah, is a piece of land little more than a mile square, connected to the main by a low neck of land, a quarter of a mile broad, probably at times isolated, and apparently better adapted for a town than the small island of Massowah. Water would be quite as conveniently obtained as at present.

The highlands seen from Massowah are Dissee Peak, on the highest part of that island; Geedan Peak, which is a small peak on the centre of a mountain, south of Massowah, and is the highest land near the coast, to the westward of Dissee Island. Near Hill is a piece of land 3½ miles W.S.W. of Massowah anchorage, with a bluff on the south part, like the end of a barn. Round Hill, to the W.N.W. of Massowah, has a small quoin on its round top, and shews well six miles north of Massowah. North Hill is a remarkable peak on the west end of the highest outer land seen from Massowah, and distant therefrom 40 miles.

From Core Dahaleah the coast runs N. by W., about 10 miles, to Ras Hurub, and from thence N.N.W. ¾ W. 18 miles, to a part of the coast called Mithahact; it then runs N. by W. 10 miles, to Coobach. Mithahact and its neighbourhood is low and sandy, bordered in some parts by low jungle, backed by salt-water swamps, where the natives procure salt, beyond which are ranges of low barren sand-hills. The coast is bordered by a reef from Dahaleah to Coobach, where it terminates; its breadth varies from 1 to 2 miles from the shore, and on some parts of it anchorage may be obtained on mud.

Ras Hurub.

Mithahact and Coobach.

From Coobach the coast runs 16 miles N. by W. ½ W. to Mersa Ebrahim; the coast between is sandy, bordered with jungle, and behind it a water-course, with high banks of soft sand.

Description *of the* Eastern *and* Northern Islands *upon the* Dhalac Bank.

Moghady. Oucan and Salma Islands.

Moghady is the south-easternmost island on the Dhalac Bank, in latitude 15° 32′½ N. and longitude 40° 55′ E. It is a high rocky island, about 1½ mile in length, north and south, and nearly a mile wide. About 1 mile to the west of it is Oucan, also a high rocky island, about 3¼ miles long E.N.E. and W.S.W., and 1 mile broad. Salma is a high rocky island, about 2 miles long, E. by N., and W. by S., and above a mile wide: it lies 3 miles N. by W. from Oucan, and has a narrow reef on its north side.

Hutteetao and Tor Islands.

Hutteetao is 3½ miles west of Salma. This is a high rocky island, about 2 miles north and south, and 1 mile broad, with a reef on its east side; and about 2½ miles west of its north end is Tor Island, also high and rocky, about 2 miles long, E. by N., and W. by S., and 1 mile broad.

Soober and Mustarmila Islands.

Soober is 2½ miles north of Salma. This is a small high sandy island, with a reef extending a mile to the north and west; and to the west of Soober, 2⅓ miles, is Mustarmila, also a small high sandy island, with a reef extending a mile to N.E.

Dahret Segarla, Segarla, Ruckah, and Rajuma Islands.

Dahret Segarla lies about 2½ miles N. by W. of Soober. This is a low sandy and bushy island, about 1 mile long, east and west, with a reef extending a mile from its north side; and 2⅔ miles N.N.W. from this island is Segarla Island, about 3 miles long, east and west, and 1 mile wide: this is a low sandy and bushy island, with a bank of shoal water, extending 1½ mile off its north side, and 1 mile S.E. from its eastern end. About 2 miles S.W. of Segarla is Ruckah, a low sandy and coral island, with a bluff of

bushes on its east end; and 1½ mile west of Ruckah is Rajuma Island, and 1½ mile to the south of it is another small island.

Billhaha, a low sandy island, nearly 4 miles N.N.W. of the north end of Segarla, is situated upon a dangerous shoal which extends 5 miles N.E. from the island, and 1 mile south from it. About 7 miles W. ¼ N. from Billhaha is Duldeah, a small, low sandy island, surrounded with shoal water, which extends 2 miles south of the island. E.S.E. 2½ miles from Duldeah, is a shoal rocky patch. Dulgoof lies 2½ miles W. by N. of Duldeah; this is also a small, low, sandy island, with a few bushes on it; and a reef extending to the N.E. and E., 2 miles. Billhaha, Duldeah, and Dulgoof Islands.

Howateb and Howateb Kebeer, are two low sandy, bushy islands, 4 and 4½ miles to the north-eastward of Dulgoof. Shoal water extends upwards of a mile to the east of Howateb Kebeer, and a 3-fathoms shoal lies half a mile off its S.W. part. At 5 and 6 miles to the eastward of it are two rocky patches of 2 and 3 fathoms; and N.E. by E. 9 miles from it, is a shoal rocky patch, with 14 fathoms close to it: this patch is in latitude 15° 59′ N., and longitude 40° 48′ E. Howateb and Howateb Kebeer Islands, &c.

Gurreet is 4 miles S.W., and Dulgold is 5 miles south of Dulgoof Island; they are low, sandy islands, situated upon a bank of shoal water, about 3 miles apart. Senach is a low sandy island, 3½ miles S.E. by E. of Dulgold, and 4 miles west of Rajumah. Jermalko is a small island surrounded by a reef, lying W. by S. 4½ miles from Senach. Gurreet, Dulgold, and Jermalko Islands.

Derome lies 7 miles W.N.W. from Dulgoof. It is a small, low, sandy island, situated upon the centre of a bank of shoal water 6 miles long, which extends E.S.E. and Derome Island.

Denafaree Island.

W.S.W. 3 miles from it. Denafaree is a small, but high rocky island, lying 3 miles south of Derome; it is situated upon a bank of rocks which extends 1 mile to the N.E. and 2 miles to the S.W. of it. N.E. by N. 3½ miles from Derome, is a shoal rocky patch.

There is deep water round and between all the islands and their reefs that have been described, but vessels coming in from the eastward must be careful to avoid a dangerous shoal bank called Shab Alli: its southern end lies about 3 miles from Soober, and it thence extends N.N.W. about 10 miles, approaching within 2 miles of Dahret Segarla, with 9 to 15 fathoms close to its west edge. It is in its widest part about 2 miles, but the bank on which it is situated is about 9 miles in breadth, having 17 fathoms close to its eastern edge: it has several patches, and various depths on it, which, as well as the depths between the islands, will be best understood by looking at the Chart.

Shab Alli.

Dulkoss and Sale Arabee Islands.

Dulkoss, or Sayeen Island, 4 miles west of Denafaree, is 2 miles long, rather high and rocky, and surrounded by shoal water on Dhalac reef; S.S.E. 4½ miles from Dulkoss and 8½ miles W. by N. from Jermalko, is Sale Arabee, a small high rocky island of coral formation, lying 9½ miles east of Doobelloo village on Dhalac, and surrounded with shoal water on Dhalac reef. N.N.E. ½ E. 1½ mile from it is a small rocky patch, and another lies north of the island, 2½ miles.

W. ½ S. 5 miles from Jermalko, and S. E. by E. 4 miles from Sale Arabee, is a small island with a reef round it, and a rocky patch 2¼ miles N. by E. of it.

Dulfeedo and Dulangebart Islands.

N.W. 6 miles from Derome is Dulfeedo, a low, sandy and coral island, nearly 2 miles long, N.E. and S.W., and 1½ mile wide: a bank of shoal water extends from it

to E.S.E., upwards of 3 miles. S.S.W. 3 miles from it, and W. by N. 6½ miles from Derome, is Dulangebart, a low sandy island, 1½ mile long, surrounded by a reef which extends 3 miles E.S.E. from it.

Mursataban, a low sandy island, 1½ mile long, east and west, lies west 6½ miles from Dulangebart; and to the N.N.W. of it, one mile, is the south end of Dulhalum, which thence extends N.N.W. 3 miles, and is one mile broad. This is a low sandy island, surrounded by shoal water: it has a fishing village on it, and there are two small sand-banks between it and Mursataban. Mursataban, and Dulhalum Islands.

S. by W. 1½ and S. by E. 2 miles from Mursataban, are the Agrub Islands, low and sandy; and 1½ mile S. by E. from the easternmost is Dahret Dulkoss Island, also low and sandy. Agrub and Dahret Dulkoss.

Sale Segun is a high coral and barren island, upwards of 2 miles off Ras Goosum, and nearly 4 miles west of Dulkoss: it is narrow at the base, and spreads out at the top, and situated near the eastern edge of the bank which forms the west side of the channel to Doobelloo anchorage. Sale Segun.

Erwa is a moderately high, flat coral island, about 12 miles in circumference, separated from Dhalac by a very narrow channel for small boats, and has a few fishermen's huts on it. On its western side is a gut, with 3 to 6 fathoms in it, leading to the anchorage for vessels visiting Doobelloo, which is of an oval shape, formed in the reef about 2 miles S.E. of the town. The narrow entrance to this place begins about 1½ mile south of Sale Segun, and the coast reef must be kept close to in order to avoid the shoal part of the banks to the eastward: the channel is extremely narrow, and to the N.E. of Doobelloo there is very little more than 1 fathom in it, and that on rocks. On the south Erwa Island. Doobelloo Anchorage.

side of the island is a large space of 5 or 6 fathoms depth. The rush of water in and out of this gut is of considerable force.

Durgoman Seggeer and Durgoman Kebeer Islands.

Three miles S W. of Marsataban are Durgoman Seggeer, and Durgoman Kebeer. The former is a low sandy island, the latter high and rocky, with wood on the S.E. part of it. They lie about 1½ mile off the N.E. point of Dhalac, and have shoal water all about them.

Nora Island.

About a mile west of the north end of Dulhulum, is the S.E. end of Nora Island, which extends 11 miles N.N.W., and is 6 miles at the widest part, nearly of triangular shape, of about 32 miles in circumference; it is a low sand and coral island, with a few spots of date trees. There are three fishermen's villages on it; one on the S.W. part, bearing the same name as the island, another on the S.E. part, and the third on the N.W. part, in a deep bay, where good water may be procured. This island is situated upon a bank of 1 and 2 fathoms, by which it is connected to the N.E. part of Dhalac. Untoentore, about 16 miles to the N.E., is upon the same bank, and also several islands to the N.W. and west of Nora, so that there is no channel for ships across the Dhalac Bank to the southward of Untoentore Island.

Good Water.

No Channel for Ships.

Dilladeah W.S.W., 3 miles from S.E. point of Nora; Durafroos and Bettah, about 3 miles S.S.W. and W.S.W. from its S.W. point; and Sale Nora, about a mile from the west part of the island, are all small rocky islands, situated near the edge of the shoal bank of Nora, with deep water at a mile S.W. and west of them.

Geserat Askar, Sale Hadassee, Nora Hadassee, Dahret, Entvedool and Duhulum, are all situated upon, and some of them near the edge of the shoal bank of Nora, off the N.W. and north part of that island, from 2 to 6 miles.

Some of them are low sandy islands, and others rather high and rocky, with bushes.

Eight miles east of the S.E. part of Nora Island, is the Island Dulfeedo, already described; and between, but rather nearer to Nora, are several low sandy islands or banks, without names. W.N.W. 5 miles from Dulfeedo, and 1½ mile off the east side of Nora, is Mahoon, a low sand and coral island of about 8 miles circumference. Nahelej is a long, low, sand and coral island, about 2 miles in the broadest part, and 8 miles long: it is off the N.E. part of Nora, its south point being about a mile to the north of the west end of Mahoon, from whence it extends to N.N.E. About 7 miles east of its north end is a 4-fathoms patch, with 14 fathoms near it.

Mahoon and Nahelej Islands.

North, 1½ mile from the north end of Nahelej, is Dahret Goobarree, a low coral island, about a mile in length, and like the two former, is situated upon the shoal bank of Nora. Three miles W. by N. from its north end is a 2-fathoms patch of rocks, with 8 and 9 fathoms near it. About 2 miles to the N.E. of this island is that of Gubbehoo, a low sand and coral island, with a few bushes on it; it is about 2 miles in length, north and south, and has a bight on its east side. It is situated upon and near the N.E. extremity of Nora shoal bank, or reef, which extends about a mile beyond its N.E. end.

Dahret Goobarree and Gubbehoo Islands.

Untoentore is the north-easternmost of this range of islands, although it is separated by a narrow channel between the reefs, of 6 to 8 fathoms. It is a low, bushy, sand and coral island, with several shoals to the westward of it: namely, one N.W. by N. 3 and 4 miles, with 4 fathoms on it; one to the west 3½ miles, very shoal; and a 2-fathoms patch, W.S.W. 2½ miles: this island, though small, has shoal water extending from it to the S.W. 2½

Untoentore Island.

miles, and the 2-fathoms patch is half-a-mile from the extreme end of it. Untoentore Island is in latitude 16° 21′ N., and longitude 40° 17½′ E.

Harmeel. Harmeel is the north-easternmost island on the Dhalac Bank; its eastern point in latitude 19° 32′¼ N., longitude 40° 15½ E., bears N. by W., distant 12 miles from Untoentore Island; it extends about 5 miles to S.W. and south, and is upwards of 13 miles in circumference. It is a low, woody, sand and coral island, with a deep bight on its north side, forming a shallow salt lake. About 2 miles east of its south end is a sand bank called Sale Harmeel, and about 2 miles west of its south point is Inteusnoo, a small, low, woody, sand and coral island, surrounded by a reef. These islands are situated upon a sand and coral bank, 8 miles square, upon which the soundings are very irregular, from 1 to 15 fathoms: the S.E. point of this bank, with 3 and 4 fathoms on it, extends to within 4 miles north of Untoentore Island.

Sale Harmeel and Inteusnoo Islands.

Romea Island and Shoals. Romea is about 5 miles west of Harmeel, and is a very small island, composed of sand and coral, and covered with wood. Between it and the bank of Harmeel is a channel 2 miles wide, with 17 and 19 fathoms; and to the W.N.W. of the island, 6 and 8 miles, are two dangerous rocky patches; the first with 4, the other with 1 fathom on it, on which the water breaks in blowing weather. There is also a breaking patch, 8 miles W.S.W. from it: it is also surrounded by several other banks of 2 and 4 fathoms, but there is deep water near the island; and, in fine weather, the banks may generally be seen.

Usbob Island. Usbob is a small, low, bushy, coral island, 1½ mile south of Inteusnoo, with a channel of 16 and 17 fathoms between them. It is surrounded by a bank, and there is a sand and coral bank one mile west of it, which is 7 miles long, and

4 miles broad; its north part is within 2 miles of the parallel of Romea Island, and there are patches of 2 fathoms on it, but a deep water channel between it and Usbob.

Hukally is a low, bushy, sand and coral island, 5 miles south of Usbob, and 7 miles west of Untoentore: a reef runs nearly 2 miles W.S.W. from it, and a 7-fathoms patch lies 3 miles S.W. by S. from the island. Hukally Island.

Sale Amber is 4 miles west of Hukally, and is a small woody island; and 4½ miles to the west of it is Suratoo. This island has some small peaked hills upon it, and is one of the highest and largest on these banks, being 13 miles in circumference, and nearly divided into two by a small inlet on its north side, which forms a lake of salt water. The island is principally composed of coral rock, and only affords a supply of fire-wood. Wooster is 2½ miles west of Suratoo, is 1½ mile long, and rather high, being composed of coral rock: there are small rocky islets lying to the eastward of its north and south ends, and a 2-fathoms patch between it and Suratoo. Suratoo and Wooster are situated upon a sand and coral bank, 10 miles long east and west, and from 3 to 4 miles broad, with from 8 to 10 fathoms on the east part of it, which extends to E.S.E. from Suratoo: there are 5 to 7 fathoms between it and Wooster, both to the east and west of the 2-fathoms patch, and no bottom at 50 fathoms close to the south of Suratoo. Sale Amber. Suratoo and Wooster Islands.

N. by W. 3 miles from Suratoo, is a patch of 2 and 3 fathoms on the S.E. part of a bank, which extends thence to the north 3½ miles, where there are 3 fathoms, and west 5 miles, where there are 11 fathoms, and 45 fathoms close to.

W.S.W. 3 miles from Wooster, is Tunnum Island, about 1½ mile in circumference, and rather high: Sale Tunnum Tunnum.

is smaller, but has a remarkable small peak on it; and there are other rocky islets lying to the W. and N.W. of Tunnum, and a rocky patch of 2 fathoms and less lying 3½ miles S. by W. from it. S. by E. 5 miles from Tunnum, is a little island called Jerome: and south, 9½ miles from it is another of the same description, called Jurmtudda; these are all situated upon one bank, whose length, north and south, is 11½ miles, and breadth, west of Jurmtudda, 9 miles.

Jerome and Jurmtudda Islands.

Tookfash and Ommarlee Islands.

Tookfash is 5 miles S. by E. of Jerome, is a low sandy island, with a 2-fathoms shoal 2 miles N.E. by N. from it. Ommarlee is 5 miles W. by S. from Tookfash, and is a small low bushy island of sandy formation; to the westward of which, 3½ miles, is Sale Badeera, a small low rocky island. Aboo Sherryer, Dahret and Mulluk, are three small sandy islands, from 3½ to 5½ miles to the northward of Sale Badeera: the first two are low coral islands covered with wood, and there is a 2-fathoms channel between. A sandy spit runs off the south end of Aboo Sherryer, and to the eastward of it, 1 and 3 miles, are two rocky patches; another to the west about 1 mile, and one midway between this island and Ommarlee. Mulluk is a low sandy island, with some bushes, separated from the others by a narrow channel of 6 and 7 fathoms in the centre, and shoal water extends to the north of the island, nearly 3 miles. About 3 miles south of Sale Badeera is Buradoo, a low triangular island, 3½ miles in circumference, with a few dome trees on it. S.E. 1¼ mile from Buradoo, is Dohul, a low quadrilateral island, 9 miles in circumference, with some dome trees on it. A small mosque and village, with about 100 inhabitants, are on the N.W. side, and near the trees. On the east side of the island are three or four wells of fresh water during the rains, but brackish in the

dry season: they barely afford sufficient for the inhabitants, who are fishermen. Dahrel is about 1½ mile west of Dohul, and is a low sandy island, and Dulbahout is a small low sandy island, with a few bushes on it, lying nearly 3 miles to the N.W. of Dahrel: the two latter islands border the east side of the inner channel.

The whole of the above islands are situated upon one bank of very irregular soundings, from 12 to 1 fathom, as will be seen by the chart. Its south extremity is 2 miles south of Dohul, and from thence to the north extremity of the reef off Mulluk, it occupies a space of 17 miles; and its breadth, from the reef to the N.E. of Tookfash to the western side, is 14 miles; but there appears to be a channel between Tookfash and Ommarlee, of 8 or 9 fathoms.

About 7 miles N.E. of Tookfash, and 11 miles west of the north part of Nora Island is Entadell, a sand and rocky island, with a shoal patch three quarters of a mile to the west of it, and a 14-fathoms channel between it and Nora. Omer Sale is 4 miles S.S.E. from it, and 5½ miles from the westernmost part of Nora, on its parallel; this is also a sandy and rocky island, and has a 3-fathoms shoal 1 mile N.W. of it, and a 20-fathoms channel between it and Nora. Entadell and Omer Sale Islands.

To the west and S.W. of the latter is Sale Rabah, consisting of high rocks, and Gad Entogaeluf, a low sand bank. Entogaeluf, Hadbaro Seggeer, and Hadbaro Kebeer, are three low sandy islands, from 7 to 8 miles west of the S.W. point of Nora, and are situated upon a shoal rocky bank. S.W. 1½ mile from the southernmost, is a dangerous rocky patch of 1 fathom.

To the S.S.E. of the latter islands, from 4 to 7 miles, are the little islands Dalbahout, Dulkoos, Dahret Dubanat, and Dillathum, all lying to the S.S.W. of Nora, and

W.N.W. of the N.W. point of Dhalac. Dallathum, heretofore described, lies off that point of Dhalac; the others lie on two sand and coral banks, with a channel of 12 to 14 fathoms between them, about 3 or 4 miles N.E. by N. from Derridgerree, hereafter described.

Howalee Huttoob, and Howalee Shoorah Islands.

West, 14½ miles from Romea, and N.N.W. nearly 12 miles from Suratoo, is Howalee Huttoob; and S.W. by W. ½ W. 6½ miles from it, is Howalee Shoorah: these are two small coral islands situated upon a sand and coral bank, 16 miles long E. by N. and W. by S., and from 3 to 4 miles broad. About 4½ miles east of Howalee Shoorah is a patch of 2 fathoms, and 4 miles W. S. W. from the same island are some rocky patches above water: there are 27 fathoms at half a mile north of Howalee Huttoob.

Kaddo Island.

S.W. ½ S. 10 miles from Howalee Shoorah, is the island Kaddo, a narrow island 2 miles long in an east and west direction, and rather high, with a rocky islet off its west end. This island is situated near the north end of a sandy and rocky bank, which running S.E. ½ S. forms a deep channel on the east side of Harrat: the bank is about 3 miles wide, and the most dangerous part discovered is the south end, where there is only 2 fathoms, which is about 9 miles west of Jerome Island. This bank extends 11 miles to the S.E., and 4 miles N.N.W. of Kaddo, has 8 fathoms on its north end, and 26 fathoms close to it. The north end of Harrat Island bears S.S.W. 10 miles from Kaddo.

Aboo Rubah Island.

Aboo Rubah is a small coral island of a wedge shape, with small rocks off the N.E. and S.W. ends: it lies 10 miles W.S.W. ½ W. from Howalee Shoorah, and N.N.W. 7½ miles from Kaddo.

Description *of the* Southern *and* Western Islands *upon the* Dhalac Bank, *forming the* Southern Channel *to* Massowah; *and the* Coast *and adjacent* Islands *from thence to* Suakin.

We have already stated that Moghady is the south-easternmost island on the Dhalac Bank, and that Oucan is to the westward of it. The next to the westward is Dulgrose Island, lying 2 miles W. by S. from Oucan: this is a high rocky island of triangular shape, surrounded by a reef, and 1¾ miles S. by W. from it is Mashilgar, a small but high rocky island, also surrounded by a reef. S. W. ½ W. 4 miles from Mashilgar is the low sandy island of Bolhessoo, about a mile in length, with a 4 fathoms rocky bank about half a mile to the N.W. of it. This little island is in latitude 15° 25′ N. and longitude 40° 43′ E., and with Ras Unduddah, from which it is distant 24 miles N. by E. ½ E., forms the south entrance of the inner channel. Omer Sarridge bears from it S.S.W. ½ W. 22 miles, and Howakel nearly S.W. by W. 23 miles. Dulgrose, Mashilgar, and Bolhessoo Islands.

N. 64° W. 13 miles from Bolhessoo, is Sale Amber, a low sandy island with a reef round it, lying 5 miles S.S.E. from the S.E. point of Dhalac Island. N.E. by N. 3½ miles from Sale Amber, is Howate, with a reef round it; and N.E., N., and N.N.W. from 2 to 4 miles from it, are Omes Nyul, Durakah el Bah, and Durakah el Bahar, all low sandy islands lying off the east end of Dhalac. Sale Amber. Howate.

W. ½ N. 4 miles from Sale Amber, is the east end of Moosmaree Island, extending thence 2½ miles W. by N., and half a mile broad: it is high and rocky, about 4 miles south of the S.E. extremity of Dhalac, and is situ- Moosmaree Island.

ated on the eastern part of a dangerous and extensive rocky spit that runs out E. by S. from the S.W. part of Dhalac Island. This island is surrounded by a cluster of rocky islets forming arches, with the water passing through them. Upon the same reef, 9 miles further to the westward, and about the centre of the south part of Dhalac, are several small rocky islets and rocks above water; and besides these at 8 miles further westward, there are some little rocky islands in the anchorage at the S.W. part of Dhalac.

Shummar Island.

About 16 miles W. ¼ N. from Moosmaree is the east end of Shummar Island, extending thence W. by N. 2½ miles, and three quarters of a mile wide, surrounded by a reef. This island lies about 3 miles from the S.W. part of Dhalac, and 5 miles E.N.E. from the island at the north point of Hurtow land, and forming therewith the narrowest part of the south entrance of the inner channel.

N.W. 7½ miles from Shummar Island is the little island Enteurah, surrounded with a reef, and hereafter described.

Dhalac Island.

DHALAC ISLAND is 120 miles in circumference, and of extraordinary shape: its south side is 23 miles long, and its greatest breadth is 18 miles. It is principally composed of coral rock, interspersed with spots affording a supply of good grass in the rainy season. The only beasts seen on the island are asses, goats, sheep, and antelopes; the latter are numerous. The number of towns or villages are seven, namely: Doobelloo, Derboshat, Salat, Dhalac Keber, at the S. W. part of the island, Goobanee, Cumbeeber and Memlah. Doobelloo, on the eastern side, has the principal trade and best appearance of any of the villages: most of the houses are built of coral and gatched, others are built of loose stones; the outer walls 10 feet high with sloping grass tops, the plastered houses having square tops: there are also some huts made of coarse grass. The principal Sheikh of the island resides at Derbo-

shat, and the others of the different villages are subservient to him.

The trade of Doobelloo is principally with Loheia and Gheesan; from thence they import jowari and dates, and give in return the produce of the pearl banks, such as fish, sharks' fins, the horny part of shell fish, turtle, and pearls. They preserve their water in tanks, which are filled during the rainy season: there are also a number of wells about 2 miles to the N.W. of Dhalac Kebeer, near the beach, surrounded by an embankment forming an irregular figure, about 200 feet across in the broadest part. During the rains there are also a number of fresh water pools upon the island. There are four mosques at Dhalac Kebeer, two of which have domes, and two burial grounds. Fresh Water.

Goob ut Sogera is an extraordinary formed place in the western side of Dhalac; the entrance to it is about 5 or 6 miles to the N.N.W. of Dhalac Kebeer. The passage is very narrow with 6, 7, and 8 fathoms in it, increasing quickly to deeper water on rounding the point of Dhalac; and a vessel should anchor in 10 or 12 fathoms near Cockloft Island, at the inner part of the passage, as further in the core there is no ground at 42 and 32 fathoms; and there are 27 to 20 fathoms near the south extremity of it, where there are three small cores of 5, 6, and 11 fathoms, the easternmost of which has mud, the other two, rocky bottom. The westernmost of these cores is the most convenient for boats obliged to procure water at Dhalac, which must be transported in mussucks, and the ship should anchor a little without this small core in 20 fathoms, to expedite the watering. Goob ut Sogera.

The tide runs with rapidity in the entrance to this place, and a ship with its assistance may get in or out with little

difficulty; otherwise with a fair wind only, for there is no room to work through. The rise and fall of the tides in this core, according to Capt. Court, is 9 feet.

Nokerah Island.

The north side of the passage to Goob ut Sogera, is formed by the island Nokerah, which is nearly 6 miles in circumference, and of middling height, composed principally of coral rock, but interspersed with small valleys, and low spots of good grass and a few dome trees on different parts of the island: there is also a village built of madrepore without cement, and with grass tops, containing about 100 inhabitants. Goats and good water can be procured; the latter is on the eastern side of the island, about half a mile from the beach, over a rugged road; it is therefore necessary to carry it to the boat in mussucks. Although there is always sufficient for the inhabitants, a ship could not be certain of procuring water here in the dry seasons.

There are three or four small islands on the N.W. side, and two on the east: the western one on the east is a high remarkable islet or rock, called Cockloft Island: it stands as it were upon a pivot, the lower part being washed off or worn away to that degree that it must soon fall, and is connected by shoal water to Nokerah, where the boats go for water. From the small island east of it shoal water projects half a mile to the south into the core, with 42 fathoms close to it.

Enteurah Island.

Three and a half miles to the S.W. of the entrance to Goob ut Sogera is the little low sandy island Enteurah before-mentioned, surrounded by a reef, and a little to the southward of it Dhalac reef extends 2½ miles from the shore, leaving a passage between it and Enteurah reef, nearly 2 miles wide, with from 6 to 13 fathoms in

it, sand and mud, with deep water close to the north and south parts of the passage.

Sale Bayuice is a small, low, black, rocky islet close to Dhalac Island, bearing S. 68° E. about 3½ miles from Enteurah, and the reef projects from it to the west 2 miles, and turns in sharply again on its south side to the coast; from thence to the S.W. part of Dhalac there is no reef, and there are 45 fathoms on mud, close to the shore, and to the projecting part of the reef off Sale Bayuice; the soundings are very irregular, from 15 to 4 fathoms, rocks, and 2 fathoms a little further on it. Sale Bayuice.

The land forms a small bight off the village of Dhalac Kebeer, which is fronted by the reef that extends along the south part of the island, and close to it the water is very deep. There are several small islands on the reef off this place, and vessels venture to anchor here; but it is not advisable for a ship to attempt it, as with a southerly wind it is a lee shore, and the bottom, excepting near the beach, in shoal water, is hard rock. Anchorage off Dhalac Kebeer.

Indubbee Island is about 1¼ mile N.W. of Nokerah Island, and is connected with it and Dhalac by shoal water: it is nearly 1 mile square, of middling height, barren and rocky, and no good anchorage off it. Terrah Island is smaller than Indubbee, is of triangular form, and separated from it by a small shoal channel. On the east and north of Indubbee are three rocky islets. Indubbee and Terrah Islands.

Gundabelee Island is 1 mile west of Indubbee, with a narrow channel between them, in which are some sunken rocks that may be seen in fine weather. On the west of Gundabelee is a shoal 2 miles long, with Gundabelee Island.

1 fathom on some parts: this bank is situated on the outermost edge of the bank, 33 fathoms being close to its south side.

Surad Island. Surad is a rocky island, of middling height, about 5½ miles north of Indubbee, and connected to a point of Dhalac by shoal water, from which it is distant nearly 2 miles, N.N.W. About 2 miles south of Surad, and half a mile from the point of Dhalac, is a 1-fathom patch of rocks. To the W. and N.W. of this patch, and between it and Indubbee, is a deep hole in the bank of soundings, with 65 and 68 fathoms near its edges: therefore, vessels should anchor off the south end of Nokerah in a convenient depth; 10 fathoms will be found in the entrance of Core Nokerah.

Dillathum Island. N. by E. 4½ miles from Surad, is Dillathum, about a mile N.W. from the N.W. point of Dhalac, with a narrow passage of 2 fathoms between. Between these islands the coast of Dhalac forms a deep bay. Dillathum is a low sand and coral island, and has a reef on its west, north, and east sides.

Anchorages. Besides the anchorages already described, there are two others, one at the N.W. and the other at the north part of the island, where ships can anchor; in fact, these appear to be the best about Dhalac. The first is opposite to Cumbeeber village, having in the south part of the bay another small village: both these villages have good water, but in small quantities. The other is opposite Goobance village.

The land of Dhalac is generally low, with some very small hills upon it, as follow: Jibbel Goosum, a coral mound, on the north-eastern part of the island; Bluff, a conspicuous mound of quoin-shape, as seen at the anchorage in Goob ut Sogera; it is situated to the

E.N.E. of the village on Nokerah Island. Imumuck, a small piece of table land, 3 miles north of Nokerah Island.

N.W. by W. 7 miles from Indubbee, is Darghelee, a small low sandy island, with a few small trees or bushes on it. One mile off its east side is a shoal of rocks and sand of 2 and 4 fathoms, with 13 to 24 between it and the island; and 1 mile south of the island is a patch of 5 fathoms, with 16 to 26 between it and the island. This patch is on the outer edge of the bank, and 50 fathoms are close to it. Durghaum is similar to Darghelee, and is nearly 2 miles to the westward of it: this island has a reef off its western end, and is near the edge of the bank. Darghelee Island.

Derridgerree is a small low woody island lying N.N.W. $\frac{1}{2}$ W. 8 miles from Indubbee, and N.E. $\frac{1}{2}$ N. $3\frac{1}{2}$ miles from Darghelee. Derridgerree.

From Durghaum to Dahrel Island is 12 miles N.W. by W., and thence to Dulbahout N.W. 3 miles. Both these islands have been described, and also Dohul to the eastward of them: they form the north-eastern boundary of the inner channel. Dahrel Island.

Seven miles N.W. $\frac{1}{4}$ W. from Dulbahout is Laboo, a small sandy island lying 1 mile off the south-western end of Harrat Island, to which it is joined by a reef. Laboo.

Harrat is a low sand and coral island, its south point being 25 miles due north from Massowah; it thence extends $7\frac{1}{2}$ miles N. by W. $\frac{1}{2}$ W., and is $1\frac{1}{2}$ mile broad. There are some dome trees near the centre, and fire-wood can be procured: a village of about twenty huts is situated to the south of the dome trees, and five wells, affording a scanty supply of brackish water in the dry season. Two miles off the north point of Harrat is a small Harrat Island.

Sale Badeera. Harrat Reefs.

rocky island called Sale Badeera, with rocks above water between it and Harrat. Harrat reef extends 9 miles N. by W. ½ W. off its north end, with which is included the small rocky island, and the soundings on it are from 1 to 18 fathoms, very irregular, as 4½ fathoms rocks were found near the north end, and 5 miles from the island only 2 fathoms, rocks. The reef also extends 5 miles off its south end, and including the island Laboo, extends out nearly 2 miles west from the south end of Harrat. The soundings on the south reef of Harrat are very irregular, between 12 and 24 fathoms at a moderate distance to the southward of Laboo, but abreast and northward of that island, there are from 7 to 4 fathoms, rocks. There is a little reef on the east and west sides of this island; that on the west forms the eastern boundary of the inner channel, which is about 6 miles wide from the extremity of Harrat south reef, to the irregular soundings off the coast, and 7 miles from the inner part of the north reef to 20 fathoms mud, near the coast.

This island and extensive reef, is separated on the east side from the main bank by a deep water channel, having from 23 fathoms in its south part to upwards of 55 fathoms towards the north, its breadth being about 3 miles, and its length upwards of 20 miles.

N.N.E. from the north end of Harrat, distant 10 miles, is Kaddo Island, islet and bank, already described, as well as Aboo Rubah, which lies N. 4° E., distant 18 miles from the north point of Harrat Island, and 17½ miles E. ½ S. from Mersa Ebrahim. It is a small coral island, with small rocks off both ends, as before said: there are 14 fathoms close to the northward of it, and 67 fathoms a mile to the eastward.

Indesillee Island.

Indesillee is a small island with a reef round it, 28

fathoms close to its west side, and 44 fathoms outside it: this island is 28½ miles N.N.W. from the north end of Harrat Island, and 7 miles E. ¼ N. from Mersa Ebrahim.

Diffnane is 6 miles N. ¼ E. from Indesillee, and 8½ miles from the nearest shore: this is a low coral island, intersected by small salt water creeks, filled with mogrove trees, and surrounded by a reef. At half a mile S.W. of it are 33 fathoms, and an 11-fathoms patch is half a mile off its N.W. side. The distance between this island and a projecting point of the shore reef is 6½ miles. Diffnane Island.

Mersa Moobaruck is about 3½ miles N. ½ W. from Mersa Ebrahim: these two are small boats' anchorages, and there is a small woody island close to the entrance of the former; and 4½ miles N. ¼ W. from it, and close in shore, is a low woody island called Gundalite. Between it and Moobaruck the coast reef extends about 2 miles from shore. Mersa Moobaruck.

From Gundalite Island the coast runs about N. by W. ¼ W. 18 miles to Garna Duff, all low and sandy. The following is a description of the hills to this place:—Sugar-loaf is a low sand hill of that shape, when bearing west; Paps is a black hill formed with two knobs—first Peak is on the north part of mountainous table land which is bluff at both extremities, and is in the first high range: 4th Peak is a round rising eminence on the north extreme of a high mountain in the second range, to the north of the first peak: when brought to the west it is a conspicuous peak. Jibbel Garna Duff is a sand hill 4 miles from the beach, with a bluff to the northward. Garna Duff.

From Garna Duff the coast runs N. 15° W. 29, and N.N.W. 16 miles to Scrabar, all low barren sand, backed Scrabar.

by high mountains in the distance. Four miles to the southward of Serabar is that part of the coast called Rarrat and Gubroo Sheikh.

Mundaloo. Mundaloo is 7 miles N.W. ¼ N. of Serabar: there is at this place a very small bay between the points of the coast reef, where boats anchor. The land hereabout is low and swampy, and a little within the beach is a salt plain, where the Bedouins come down with their camels to procure that article.

Ras Casar. N.N.W. ½ W. 18 miles from Mundaloo, is a projecting point of the land called Ras Casar, 1 or 2 miles to the southward of which is a bight or bay, called Brassy. The shore reef about here projects nearly 2 miles off the coast, with breakers; and within the outermost part between the patches are 3 or 4 fathoms, where buggalows anchor: the coast is low and sandy, backed by high land.

Aboo Yahbis. N.W. ¼ N. 5½ miles from Ras Casar is Aboo Yahbis, a low bushy cape with small white sand hills: from thence the coast trends away to the south and north-west, forming small bays of shoal water, with islands in front of them, upon the coast reef, *viz.*:

Sale Bar. Sale Bar, a small rocky island off Aboo Yahbis: to the N.W. of it a rather large, but low bushy island, for which we have no name. The next is a small sandy island, with the

Ras Abeed. highest part to the eastward, called Ras Abeed: it is separated from the main by a narrow channel of shoal water, affording protection for small craft, there being 1, 2, and 3 fathoms in it.

Eree Island. To the N.W. of this island is Eree, about 4½ miles in length, north and south, of very irregular shape, measuring nearly 14 miles. This island is low and sandy on the east part, but on the western part are the ruins in coral rock

of the ancient Ptolemais Theron: the highest part is a mound of ruins which is visible from Ras Abeed, from whence it is west 3 miles. Many tanks were seen there.

There is a bay formed on the west side of the island, with 3 and 4 fathoms, mud, the former depth being pretty close to the island. The entrance into this bay is along by the north side of Eree, passing between the western extreme of that island, and Ras Furragene to the N.W. of it; but there are only 2 and 2½ fathoms in the entrance, on a bar formed on a continuation of the coast reef from Ras Abeed, whence it runs along the east and north sides of Eree, and then off from its westernmost point to the islands off Core Nowarat.

Quoin Hill is a near range of sand hills 4 miles from the beach; Round Hill is to the west of it, and about 6 miles from the beach; Sugar-loaf is a rugged steep hill in the first range of highland. Quoin Hill.

Description of Core Nowarat.

This is, without exception, the finest bay in the Red Sea; its breadth from Ras Istye to Ras Furragene is 4½ miles, and it is nearly the same in depth from Furragene island; but the island of Badour is in the centre of it, so that a channel is formed round that island. In the outer part the soundings are from 4 to 6 fathoms, mud: in the inner part, where vessels anchor, there are 4 fathoms towards the island, gradually decreasing to 3 and 2 fathoms near the main. The outer part of the bay is bordered by a chain of low sand and coral islands, which effectually keep out the swell of the sea: they are formed upon coral reefs, and there are a few bushes or small trees on some of them. The northernmost of these islands is Jeseerat

Gooban, a low coral island; the most elevated of the whole to the S.E. of it are the Hadjarah Islands, three in number, and situated upon one reef. A little within them is Jeseerat Shetevo, and to the S.E. of it an island nearly 3 miles long, called Furragene; these two are also situated upon one reef, which is connected to the coast reef off Ras Furragene, upon which are two or three other small islands. There are also some small islets between Badour and Furragene Islands, and a shoal easily discernable just to the west of Shetevo Island; and two small islands in a swampy bay west of Ras Istye.

Badour Island and village.

Badour Island, or Aggeeg Kebeer, is 2½ miles long, and three quarters of a mile broad, formed of coral rock with a low sandy plain on the west; on the eastern part it is rather woody. The village of Badour is a small place, consisting of about 60 huts, and a square stone mosque, and a little west of the town on the margin of the island opposite the ship's anchorage is a small tomb. About a quarter of a mile from the village are some stone tanks, cut out of the solid rock, but most of the water found in them was very brackish, nor could better be found either on the island or the main.

Directions for Core Nowarat.

Sailing in to Core Nowarat, the only proper entrance for ships is between Gooban Island and the Hadjarah chain to the S.E. of it, then round Ras Istye, and steer S.W. by S. to clear the shoal off Shetevo Island; then in passing round the western point of Badour Island, give a small spit off it a berth, and anchor in 4 fathoms S.W. of the village.

There is a channel between Furragene and Hadjarah Island, through which the *Benares* sailed; but it is very narrow, and cannot be recommended for ships, there being a quarter less 3 fathoms in some parts. Small vessels

proceeding from Core Nowarat to the southward find this a convenient channel during northerly winds, or coming into the Core from the south with southerly winds, as it shortens the distance in and out, as well as time in working through the north channel.

Fishing boats find a channel in from the S.E. by crossing the reef between Furragene Island and Ras Furragene.

There are no supplies to be obtained here, so that the only advantage to be derived from this excellent harbour is the protection it affords in stormy weather.

The coast surrounding the bay is low and sandy, and the high land approaches within 5 miles of the coast, and perhaps spots might be found where wells could be dug, and a sufficient supply of good and wholesome water be obtained. The following is a description of the hills from Badour:—

Saddle Peak, or Sugar-loaf, is the southernmost detached hill of the near range to the south of Badour, and resembles a sugar-loaf. Rugged Double, or Hummock Peak, is a remarkable rugged-topped hill to the westward of the former. Bluff Peak is to the N.W. of the last, and in the same range, being about 10 miles from the beach, and is the highest northern part of the mountains to the S.W. of Badour. Chimney Hill is a high remarkable mountain on the most distant range in the same direction as the last. Quoin Hill is a small peak in the north part of the near high range to the west of Badour. Mound Hill is a low double-topped hill by itself to the westward of the near high range of land surrounding the bay, and approaching the entrance to Badour, for which it is a good mark; it looks like an island.

Saddle Peak.

Hummock Peak.

Bluff Peak.

Chimney Hill.

Quoin Hill.

Mound Hill.

N.W. ½ N., 3½ miles from Ras Istye, is Ras Shakkul, and N. 54° W., 12½ miles from Ras Shakkul, is Ras As-

Ras Shakkul.

Ras Asseuse.

sease, the coast between forming a deep bay with soundings of 12 to 6 or 5 fathoms. From 2 to 3 miles west of Ras Shakkul are the two Amarat Islands; they are low and sandy, with a few bushes upon them, situated upon a coral reef; a small islet lies on it also to the south of the easternmost island, and a little beyond it a rocky patch.

Amarat Islands.

Between these and the cape land is a passage to Aggeeg Seggeer, a small island in the bottom of the bay, bearing S.W. by W. 6½ miles from Ras Shakkul. This island, with a small tongue of land to the westward of it, forms an anchorage in 5 or 4 fathoms, and half a mile from the beach are some wells dug in the sand, containing brackish water in the dry season. About one mile from the beach, in the direction of Quoin Hill, are some remarkable ruins in a straight, narrow line, 1½ mile in length, and from 20 to 60 feet wide; they are situated upon raised ground, sloping from the centre to either side, and there are many graves. About 5½ miles N.W. by W. of the tongue of land at Aggeeg Seggeer is a similar one running to the north, with a reef, on which are some islets, and another to the eastward of it; this place is called Barrat Dodom; and from this tongue to Ras Assease it is 7½ miles N. ¼ E.

Aggeeg Seggeer.

From Ras Assease the coast runs N. 53° W. 14 miles to a projecting point of the coast, and from thence N.W. by W. 11½ miles to Ras Mucdum. The land all along the coast from beyond Ras Assease is a very low sandy shore, with a layer of soft mud beneath it, and continues of the same description several miles inland; but after passing the above-mentioned projecting point of the coast, there are a few sand-hills.

Ras Mucdum.

A mile or so to the south of Ras Mucdum is Trickatatah, off which place there is anchorage in 6 fathoms inside a reef, which bears from it N.E. by N. about 500

Trikatatah Anchorage.

yards. This part of the coast is low barren sand, full of salt water swamps, and some parts covered with bushes, but no fresh water known to be procurable. Within a narrow woody neck of land is a deep bay of shoal water, the entrance to which forms a small bay for boats; but ships must anchor to the east of this narrow neck of land, between it and a breaking reef called Guttal Kennarshar, where they will have 6 fathoms. About 4 miles S.E. ½ E. from Ras Mucdum is a rocky spot called Guttat Tromba, and 3 miles N.N.W. from it is Ras Mugda.

From Ras Mugda to Suakin.

From Ras Mugda to Suakin the direct course is N. 41½° W. 32 miles, but the coast between forms a bight, encumbered with reefs and shoals. Close to the east of Ras Mugda is a shoal patch, and close to the north of it are some islets. A projecting point, consisting of sand-hills, lies 5 miles W. by N. from the Ras, the coast between forming a bight. From this projecting point to Mersa Sheikh Saad is N. 60° W. 13 miles, the coast also forming a bight, in which is Buckat Island, and another to the westward of it; the former is situated on the shore reef, which extends from Ras Mugda towards the projecting sandy point, whence it suddenly turns off to N.E. 2 miles forming a point, and thence westward, with some islets on it, 7 miles, where it suddenly turns in S.S.E., and forms a bight close to the shore. From thence it runs up along the coast to Suakin, extending from half to 1½ mile from shore all the way, having however some breaks in it. The first of these breaks is 7 miles N.N.W. from Mersa Sheikh Saad, and is called Mersa Hadoo; and 2 miles further is another, called Mersa Legakinde; north of the latter 3½ miles is Mersa Entabeel, which is 7 miles S.S.E. of Suakin.

Mersa Sheikh Saad.

Mersa Hadoo, Mersa Legakinde, and Mersa Entabeel.

Suakin Core.

SUAKIN.—The Core of Suakin is bordered by a reef of rocks, between which, in the narrowest part, it is about

150 yards broad : its depth is little more than 2 miles. In the entrance of the Core there is a depth of 21 fathoms, mud ; and it is open with the south mosque bearing S. 46° W., when Warrantor Hill will be about west. The soundings throughout the channel are mud, and the depth decreases gradually on approaching the town : the widest anchorage is to the north of Sheikh Abdallah tomb in 6 to 8 fathoms, mud ; but that off the town, between the landing place and S.E. part of the above island, is the most convenient. There is a ruined tower on the north side of the entrance.

Suakin Town. The town of Suakin is built of madrepore, and is situated upon a small island of the same name ; the houses are very small, seldom containing more than one room, though some few have also an upper room with a veranda : for supplies, it has to depend upon Ulgaff, situated on the main at the bottom of the Core. The water between them is shallow, and there is constant communication between

Ulgaff Town. the places throughout the day by ferry-boats. Ulgaff is much larger than the town of Suakin, and consists of grass huts surrounded by compounds : it has a bazaar, in which a few cattle may be had occasionally, but firewood, milk, ghee, coarse mats, jowarri, grass, and butter, were the principal articles ; fish is very scarce. Good water can be obtained at a moderate price ; it is brought from about a mile beyond the town on donkeys.

The Core lies in a S.W. and N.E. direction, and the general winds are either land and sea breezes, or blow in a line with the coast, inclining off the land at night, and from seaward early in the forenoon. By weighing at sunrise the *Palinurus* was always able to lie close hauled out of the Core, keeping the weather side on board ; and by so acting she has sailed in and out four times ; in March

and June 1830, January 1831, and June 1833. The reef bordering the Core is easily seen, and there is a rock or two above water at the entrance.

Warrantor is the highland just to the northward of Suakin; it is the largest conical hill in the first range, and forms with two small knobs when seen off the place. Farther north, off Mersa Quoih and Shab Dammart, its summit forms the lower section of a truncated cone; and from Jeseerat Abdullah the whole of it appears in the shape of a neat's tongue.

Inner Channel to Suakin.

Commencement of the Inner Channel.

The shabs or reefs that form the inner channel to Suakin, and thence northward, commence off Ras Mugda. At 3 miles N. by E. from that projecting point of land is an islet on the S.E. point of the first reef, which extends thence about 16 miles to W.N.W., its western edge forming, with the coast reef, the narrowest part of the inner channel. The entrance is between the islets off the cape and the islet just mentioned, at 3 miles N. by E. from it, which is still rendered narrower by a curved reef running from S.E. to S.W. from the islet, reducing the entrance between it and the islets to little more than a mile: the inner edge of this reef extends from the islet W. by N. 3 miles, with several small islets on its edge, where it forms a bight to the north, and thence in a curve bending northward, it runs 7 miles to the westward, to within half a mile of the coast reef; and to the northward forming the narrowest part of the channel, in which are 10 fathoms, the breadth being about a quarter of a mile. Between the south edge of this shab and the coast reef, after passing the entrance, and before arriving at the narrowest part, the breadth is from 2½ to 3 miles with good depth, but there

are some shabs and patches in it to be avoided, and which will be best understood by a glance at the chart.

From the islet on the S.E. point the outer edge of this shab runs N.W. ¾ W. 11 miles, marked by rocks with 10 to 14 fathoms close to; there is one island on its edge, about 7 miles from the islet, called Sumar. From its N.E. point it runs west 7 miles, and thence away to S.S.W. towards the shore reef opposite Mersa Sheikh Saad. Great part of this north edge of the shab dries at low water, and is called Ul Shubuc, there being from 4 to 16 fathoms close to it.

Nearly 4 miles N.W. by N. from the aforesaid islet on the S.E. point of the shab, and rather more than a mile from the edge of the shab, is a reef about a mile in length, called Gaad Hogeet; there is deep water near it, and it may be passed on either side by vessels proceeding either to or from Suakin; but the best passage is between it and a reef with two islets on it, lying 4 miles N.N.E. ½ E. from it, the depth between being from 14 to 18 fathoms. There are 2 fathoms on the north part of the reef with the two islets, and 1½ mile N.W. from it is the south end of a shab, which extends 3 miles north, and is one mile wide; between these are 17 and 18 fathoms; on the north end of the shab 5 fathoms, and 18 fathoms close to it. The reef with the two islets lies N. ¼ E. 9½ miles from Ras Mugda, and the north end of the shab in 5 fathoms lies 23 miles S.E. by E. ½ E. from the entrance of Suakin.

Gaad Hogeet.

Rather more than 3 miles north from the N.W. part of Ul Shubuc is the S.E. point of a cluster of shoals and islets, which extends from thence 4½ miles W. by N. to within 1¼ mile of the shore reef at Mersa Hadoo, which is the breadth of the inner channel at that part, the depth therein being from 9 to 34 fathoms. From this point the

boundary of this cluster turns to N.E. by N. 2½ and E.N.E. 2½ miles to its N.E. point, which is nearly 5 miles N. by W. from its S.E. extremity. This is called the Gad Etwid reefs, from a dry sand-bank of that name on its N.E. extremity. To the S.E. and south of this bank are three similar ones, two of which are Gad Alli and Gad Darah; there are many patches of breakers and sunken rocks between these, and also throughout the cluster, but there is no navigable passage between them, although there are some spots of deep water. Gad Etwid Reefs.

E. by N., 3½ miles from Gad Etwid, is Etwid Island, small, but surrounded by a reef, and to the south of it half a mile is another rather larger island, also surrounded by a reef. At half a mile east of the latter island is a breaking patch, and at 1½ and 3 miles to the southward of it are two patches of 5 and 6 fathoms, with 20 fathoms between them, and 19 fathoms close to the southward. Between Gad Etwid reefs and Etwid Island is a passage 3 miles wide, with 16 to 26 fathoms in it. Etwid Island and adjacent Reefs.

To the north and N.W. of Etwid Island, from 1 to 2 miles, are two breaking reefs, and 4 miles further N.W. by W. is another, with 19 to 25 fathoms between. This latter reef bears E.S.E. 6 miles from the entrance to Suakin: it has four small breaking patches to the east and N.E. of it, and four larger ones between it and the Gad Etwid reefs; the latter patches lie from 2 to 3½ miles from the coast reef, and there are from 5 to 45 fathoms between. Reefs to the northward of the Gad Etwid cluster.

Although the principal part of these reefs and patches may generally be seen in the day, if a good look-out be attended to, nevertheless a look at the chart will show that the inner channel is preferable.

Having given a description of the reefs and dangers near the coast, and forming the inner channel to Suakin, we shall now return to the southward, and describe the islands, shabs, &c., lying off the coast, between the parallels of 18°20′N. and 19°25′N.

Dahrat Abbeed.

The southernmost of these islands is Dahrat Abbeed, in lat. 18°21½′N., long. 38°51½′ E., and bearing N.E. ½ N., distant 20 miles from the point of Aboo Yahbis. N.N.E., 10 miles from Dahrat Abeed, is Gurb Miune, surrounded by a reef, and 2 miles W. by S. from it is Miune, also surrounded by a reef, and 160 fathoms close to its S.W. side. W.S.W., 4 miles from Miune, is Derrahkah, surrounded by a reef, and no bottom at 80 fathoms close to the northward of it. Eddom Sheikh is also surrounded by a reef, with 90 fathoms close to it: it lies nearly north 6½ miles from Gurb Miune, and 3 miles to the westward of it is Gurb Abbe Easah. Three miles north of Miune is Dahrat Duggelet, surrounded by a reef, with no bottom at 90 fathoms near it. Delgabe, surrounded by a reef, lies 13 miles N.N.W. ½ W. from Dahrat Abbeed, and 5 miles N.W. ¾ N. from Derrakah; and N.E. by E. ½ E., 4½ miles from Delgabe, is another island surrounded by a reef, and called Easah Abbe. This group of nine islands are all low coral and sandy spots, from half a mile to two and three hundred yards across, with a few bushes upon them. Between Gurb Abbe Easah, Eddom Sheikh, and Dahrat Duggelet, is a reef a-wash, lying in a north and south direction 1½ mile, with no ground at 60 fathoms on its eastern side; and N.N.E. ¼ E., 4 miles from Dahrat Abbeed, is a small patch of one fathom, called Suffenot shoal, with no bottom at 40 fathoms close to the westward of it.

Gurb Miune, Miune and Derrahkah Islands.

Eddom Sheikh.

Gurb Abbe Easah, Dahrat Duggelet, Delgabe, and Easah Abbe Islands.

Reef a-wash.

Suffenot Shoal.

The Aggrab.

The Aggrab Islands are situated upon a dangerous coral

reef, which is 6½ miles in length north and south, and 5½ miles east and west, including patches in its neighbourhood. There are six small islands, or more properly sand and coral banks, on this reef, upon which when there is a swell the sea breaks heavily. The three northernmost are called the Aggrab Islands; the two next southward the Gurb Islands, and the easternmost the Abboo Murina. The water is very shoal on this reef, caused by pinnacle coral rocks, and there is no bottom at 40 fathoms between them, and close to the westward of Gurl Island. The northernmost Aggrab Island is 13 miles N.E. of Ras Shakkul; the southernmost Gurb Island and Abboo Murina bear N.60°E. from the same Ras at the respective distance of 12 and 14½ miles; and Abboo Murina bears about W. by S. 12 miles from Derrakah Island.

Gurb, and Abboo Murina Islands.

About 4 miles to the southward of the Gurb Islands, and from 9 to 12 miles to the eastward of Ras Shakkul, is a rocky bank of 7 to 16 fathoms, with 40 and 50 fathoms between it and the shore; and 3 or 4 miles further to the E.N.E. there are 8 and 10 fathoms, with no bottom at 30 and 40 fathoms very near.

Darah Terass is a low sandy coral island, lying N.N.E. ¼ E. 12 miles from Ras Assease; it has 26 fathoms close to it, and 20 fathoms midway between it and the main land. E.S.E. ¾ E., 6 miles from Darah Terass, is a dangerous rocky reef.

Darah Terass Island.

N.W. ½ W., 14½ miles from Darah Terass, and E. by N., 15 miles from Ras Mugda, is Tellahtellah Seggeer Island, surrounded by a reef, with 17 fathoms near its S.E. side, and 5 near the N.W. side; and at the distance of 6 miles N.N.W. ½ W. is a bank of 5 or 6 fathoms, with 10 fathoms on the S.E., and 30 fathoms on the N.W. side.

Tellahtellah Seggeer Island.

E. by N., and more northerly from Tellahtellah Seg-

Tellahtellah Kebeer Islands.

geer, at the distance of 9 miles, are the Tellahtellah Kebeer Islands: these are three low sand and coral islands, having at a distance the appearance of being only one; they are covered with bushes, and the extent of the reef on which they are situated is 3 miles north and south, and about 2 miles broad. From Tellahtellah Seggeer to these islands, the soundings are regular, increasing from 7 to 28 fathoms, and then gradually decreasing to 20 fathoms, after which they are irregular towards the islands on rocks and sand.

Timershear Island.

N.E. by E. ½ E., 19 miles from Tellahtellah Seggeer, is the Island Timershear, a low sand and coral island, where anchorage may be obtained in great necessity; it is surrounded by a reef, and there are 6 to 12 fathoms near its south side, but the island is too small to afford any protection from swell.

Undee Sellee and Locha Islands.

About E. ½ S., 17 miles from Timershear Island, is that of Undee Sellee, a low circular coral island, about half a mile in diameter. W.N.W. of this island, nearly 2 miles, is a patch of rocks. About S.E. ½ S., 5 miles from Undee Sellee, is Locha, also a low circular island, about half a mile in diameter, with 67 fathoms at a short distance from its south side.

Shab Locha.

Shab Locha is a breaking reef, above a mile in extent, lying 8½ miles S.W. from Locha Island, and N.W. by W. ¾ W., 18 miles from Eddom Sheikh Island.

Mussarmroo and Gurram Mussarmroo Islands.

E. ½ S., 7 miles from Locha, is the Island Mussarmroo, in latitude 18° 50′ N., and longitude 38° 51½′ E.; and S.E. by S., 2 miles from it, is Gurram Mussarmroo: they are both low sand and coral islands, with bushes on them. There is no ground at 90 fathoms close to the former: at 1½ mile south of the latter there are 40 fathoms.

Barmosa Seggeer and Barmosa Kebeer Islands.

Barmosa Seggeer is in latitude 19° 3′ N., longitude 38° 17′ E., and bears N.W. ½ N., 9 miles from Timershear: this island is about half a mile long, composed of coral and sand.

N.¼W., 10 miles from this island, is Barmosa Kebeer; this island is about three quarters of a mile in length, in an east and west direction, and is also composed of sand and coral, with a few bushes. There is a reef at about a mile to the N.W. of this island, and no bottom at 100 fathoms close to its south side.

About W. ½S., 9 miles from Barmosa Kebeer, is Barcoot, a low sand and coral island, without anchorage, there being no bottom at 135 fathoms close to its south side. There are four large breaking reefs, extending nearly 5 miles to the northward of this island; the second is called Shab Barcoot, and the northernmost Shab Cootab. The latter bears W.N.W.½W., 10 miles from Barmosa Kebeer, and S.E. by E.½E., 8 miles from Hinde Gedam. Barcoot Island. Shab Barcoot and Shab Cootab.

West, 15 miles from Barcoot, is Sale Addar Kebeer, a small sand and coral island, lying 22 miles E. by N. from the entrance to Suakin: there is no bottom at 120 fathoms a short distance to the S.E. of it. Sale Addar Kebeer Island.

N.E. by E., 7 miles from Sale Addar Kebeer, is Sale Addar Island, of similar description; and about 2 miles E.N.E. of it is a rocky patch. Hinde Gedam Island is about 4 miles N. by E. of Sale Addar: this is a low sand and coral island, and so steep, that there is no bottom at 220 fathoms close to its south side. It is in latitude 18° 21′ N., longitude 37°57⅓′E., and bears from the entrance of Suakin N.66°E.31 miles. About 2¼ miles E. by S. from it is a rocky patch, and a similar patch at about the same distance W. by S. from it, with no bottom at 57 fathoms close to the westward of it. Sale Addar and Hinde Gedam Islands.

About 3½ miles to the west of Sale Addar Kebeer, is Shab Mobiyett; it is a narrow reef, about 18½ miles N.75° E. from the entrance to Suakin. Shab Amber begins to the north of the former, and extends 3¼ miles northward, having Shab Mobiyett. Shab Amber.

deep water close to; its north end bears N. 65° E., 19 miles from the entrance to Suakin.

Shab Gusser. S.W. ½ W., nearly 5 miles from Shab Mobiyett, is Shab Gusser, about 1½ mile in length east and west; and about

Shab Toucel. a mile to the southward of it is Shab Toucel, upwards of 1 mile long, in a N.W. and S.E. direction, bearing nearly east from the entrance to Suakin, distant 14 miles.

About 11 miles to the eastward of Shab Toueel is a

Shab Munkar. breaking patch, called Shab Munkar.

DESCRIPTION *of the* COAST *of* NUBIA, *from* SUAKIN *to* CORE DULLOW, *with the* ISLANDS *and* REEFS.

N.byW.¼W., 4½ miles from the entrance of Suakin, is

Mersa Quoih. Mersa Quoih, the entrance to which is narrow, and the anchorage small, but the water is smooth, and the depth 8 or 9 fathoms, mud. Should a small vessel find it necessary to anchor here, she should drop her anchor as near to one side as possible, as no great range of cable can be veered out. At this anchorage Warrantor bears S. 66° W.

Shab Damart Anchorage. One mile further north the *Benares* anchored in 14½ fathoms to the south of Shab Damart, so called from a Mersa for boats in its vicinity. It is a projecting part of the coast reef, with indifferent anchorage on the north and south sides. To the south of the dry part of the reef are some rocky patches, on one of which 4 fathoms were found, and some of them are nearly dry. Warrantor bears from the anchorage S. 62° W.

Mersa Ahtah. Nearly 9 miles N. by W. ½ W. of Suakin is Mersa Ahtah, a small Core in the coast reef, with a narrow entrance, forming an anchorage for a buggalow: to the northward of it 3 or 4 miles are some small islands, inside the coast reef and close to the shore, where fire-wood may be obtained.

Nine miles further N. by W. ½ W. is Jeseerat Abdullah, in which there is good anchorage in 7 fathoms, soft mud, Little Haddar Owwee Hill bearing S. 74° W. This place has little protection for ships, and within the above anchorage are some straggling patches of rock; there is also one in the entrance, on which 5 fathoms were found, and there may be less. Bullocks, sheep, and goats, can be obtained here; fire-wood may be had for cutting, and there is a well of brackish water about three-quarters of a mile from the beach, and just to the left of Little Haddar Owwee Hill from this anchorage. Jeseerat Abdullah.

Haddar Owwee Hill is just to the south of Jeseerat Abdullah; it is at that anchorage hidden by a peak on the near high land, but towards the south it shews as a round hill. To the north of the peak on the near high land is a small hill, like Haddar Owwee when seen from the south, and therefore has been named Little Haddar Owwee.

N. by W. ½ W., 9½ miles from Jeseerat Abdullah, is the entrance of Mersa Sheikh Baroud, in which the *Benares* anchored. This Mersa is called after a chief of that name, the ruins of whose tomb are on the north point of the entrance. The Core is formed by a gap in the coast reef, by which it is also bordered, and extends inland 3 miles. The soundings in mid-channel are mud, decreasing gradually from the entrance: when abreast of the place, the notch in Azzood Trelor bears S. 83° W. The *Benares* anchored just within the ruined tomb. Sheep and goats can be procured here; there are also some springs of good water on the south side of the Core, about a mile from the beach; but as the road is very bad for casks, it is advisable to be provided with skins for holding water, to be conveyed to the boat on camels or asses, which may be obtained for that purpose for a trifling sum. Mersa Sheikh Baroud.

Azzood Trelor

Azzood Trelor, west of Sheikh Baroud, is the highest land immediately north of Haddar Owwee, and has a remarkable notch in its top, by which it may be known.

Shar Kerrib.

Shar Kerrib, the next high land to the above, has its top in the shape of a saddle, and Haddle Ourl is a peak under it, when seen from Geehye, but to the north of it at Sheikh Baroud, and south of it at Mersa Duroor.

Mersa Geehye.

Mersa Geehye is about 3 miles north of Mersa Sheikh Baroud, and is formed by the coast reef and two or three low swampy islands; it is very narrow, with deep water close to its edges; the anchorage is contracted, and the depth 9 or 10 fathoms. To sail in, keep close along the weather side, and anchor near the weather shore, in order to have room to veer cable. From the entrance, Azzood Trelor bears S.76°W.

Mersa Duroor.

Mersa Duroor is nearly 12 miles north of Mersa Geehye, or 42 miles from Suakin, in latitude 19° 49′ N. The anchorage is formed in the coast reef, with a rocky shoal off it, and some low swampy islands. There is a channel on either side of the shoal off its entrance, but the northern one appears to be the best: the soundings in mid-channel are mud, and decrease gradually. The best anchorage is just within the outermost island, in $3\frac{1}{2}$ or 3 fathoms, from whence Saddle Hill, or Shar Kerrib, bears N.80°W. A little to the N.E. of the entrance of the Mersa are some rocky patches, on which the least water found was 5 fathoms. Wood and water may be procured, although the latter is not considered quite so good as that at Suakin; but it is more convenient, being about half a mile from the beach, and is brought down in goat-skins upon asses. Bullocks, sheep, and goats, are also to be had.

Mersa Fedger.

N.by W.$\frac{3}{4}$W., 12 miles from Mersa Duroor, is Mersa Fedger. This Core is formed by a break in the coast reef,

in the bight of which there is good anchorage in 13 fathoms, mud. Within this anchorage is a sandy spit, forming a small bay, in which there are 6 and 7 fathoms water, but the channel into it is narrow. There is a shoal which forms the south side of the entrance of this Core, and extends along the coast reef in patches to Mersa Arroors, which is 1 mile to the southward, and is an anchorage for boats only: on this shoal is a 1 fathom rock, with 5 or 6 fathoms between. To enter Mersa Fedger, keep close along round the point of the reef forming the north side of the entrance. Goomud Rhabal bears N. 83° W. Wood may be cut here, and bullocks may be obtained.

Goomud Rhabat, the most conspicuous land on this coast, is a high conical mountain, with a crooked peak on its top: it is just to the north of Mersa Fedger, does not alter its appearance, and may be seen from the south of Jeseerat Abdullah to the Island of Macowa. Goomud Rhabat.

North, 8½ miles from Mersa Fedger, is Owee Terree: this Mersa is a gap in the coast reef, 600 yards wide at the entrance, and about the same depth, with 26 fathoms, mud, in mid-channel, which decreases to 8 fathoms close to the reefs. Country boats anchor here close in, but there is no protection for ships. Off this anchorage Goomud Rhabal bears S. 80° W. Mersa Owee Terree.

Mersa Arrakea is 12 miles to the north of Mersa Fedger, or 65 miles from Suakin. The coast from Owee Terree has some rocky patches near its reef, and the entrance to this place is surrounded by them, with deep water close to it. This anchorage is narrow and encompassed by a reef, which, with northerly winds, make it necessary to keep the weather side of the Core close on board. In mid-channel, the soundings are 12 fathoms, mud, and there is smooth water with all winds. The ship's anchorage is on the eastern side Mersa Arrakea.

of a small coral island, which is in the entrance to a small bay of 6 and 7 fathoms. The channel into this Core is to the northward of the largest shoal off its entrance, with the mouth of the Core open, leaving two small patches on the right hand, Goomud Rhabal being then on with the south end of the island in the bay, bearing S.74°W. It is reported that excellent fresh water may be obtained here.

False Chimney Hill.

False Chimney Hill is to the north of Mersa Arrakea; it is just seen off Sheikh Baroud as a high mountain with a rugged top, assimilating to chimnies, from whence it is so named. Its range appears to be east and west. Off Owee Terree and Mersa Arrakea it appears as a sharp peaked mountain like a sugar-loaf, and at Salaka its top is seen just above the south brow of a round, elongated mountain, which is known by a remarkable piece of land a little south of it, called Table Hill; this is the lowest piece of land near the coast a little below Salaka.

Table Hill.

Salaka.

SALAKA is 14½ miles to the northward of Arrakea, or 79 miles from Suakin; when off this place, Table Mound bears S.77°W. There are some rocky patches near the coast reef, about 6 miles south of it, and the narrow part of the channel, between the coast and outer reefs, is only half a mile south of this place. There is a projecting sandy spit, bordered by the coast reef, and a small bay formed to the westward of it, between the sandy spit and some sunken rocks to the southward of it (whose discoloured water may be seen in clear weather), in which is an anchorage in 9 or 10 fathoms, mud, surrounded by sunken patches of rocks. This is what Captain Courts called Mousetrap Bay. The channels leading to it are narrow; that to the eastward is close round the sandy spit reef, avoiding some small patches off its edge a little outside the spit, and passing between them and the larger patch to the southward of it. The south

channel is inside the sunken rocks to the S.E. of the sandy spit; it is a little wider than the eastern channel, but the eye through both can be the only guide. The least water the *Benares* had in these channels was 3 fathoms, rocks, but between the sandy spit reef and shoal to the S.E. of it, there are 9, 8, 7, 6, 5, and 4 fathoms.

Those who do not wish to go into this intricate place, may obtain anchorage outside the sandy spit, upon the south of its reefs, but the water deepens quickly off it; the *Benares* anchored in 3½ fathoms, rocks and sand, and when brought up was in 10 fathoms, rocks and sand. This anchorage is very indifferent, with bad holding ground, and will not answer in southerly winds; it is also doubtful if the inner anchorage is protected from them by the surrounding patches of sunken rocks. There are no supplies of any description to be had here. Salaka Outer Anchorage.

Little Salaka is a mile to the southward of Salaka, and is only a narrow break in the reef, which leads into a small bay, full of shoals, a fit anchorage for nothing larger than boats. Little Salaka.

Mallago, so called by the natives, or Chimney Hill, is to the west of Salaka; it is a high rugged-topped mountain, approaching the appearance of chimnies more than that named False Chimney Hill. It has the same appearance throughout, and is seen from Mersa Fedger to Macowa Island. Mallago or Chimney Hill.

Duberdabb is 12 miles to the northward of Salaka. The Tyflah islands are to the southward of it, and between them and the main is the channel in, which is only half a mile wide, and the anchorage bears from the north part of the island, N.78°38′W. 2 miles. This anchorage is small, but the soundings are mud, and good protection from northerly winds may be found by anchoring close up inside the point Duberdabb.

of the reef. There is a remarkable dark hill in the range nearest the coast, and the Funnel Hill appears open to the northward of it at this anchorage.

Funnel Hill. Funnel Hill, so called from its similarity, is to the west of Duberdabb, in the southern extreme of Jibbel Trebur, and is shut in behind the sugar-loaf at Macowa.

Jibbel Trebur. Jibbel Trebur is a high distant mountain above Duberdabb, beyond the second slope. On its top, northward, are two small rugged elevations, the northernmost of which is seen from Owee Terree to Core Dullow, where it shews as the highest part of land to the southward.

Small Peak. Small Peak, on the near hills, has a flat top, and is a little to the north of Jibbel Trebur. Sugar Loaf is a peaked mountain in the range between Jibbel Trebur and the coast, and is a little to the north of the Funnel Hill above-mentioned.

Tyflah Islands Anchorages. The Tyflah Islands are about half a mile from the coast, near Duberdabb, and consist of three or four sandy patches with a few bushes on them; they are surrounded by shoal water and sunken patches of rock; but anchorage may be had under the westernmost sandy patch against northerly winds, in from 10 to 4 fathoms, very irregular soundings; and protection against southerly winds may be found, in irregular soundings of 5 to 14 fathoms, 1½ mile north of these islands.

Core Makafal. About 9 miles to the northward of Duberdabb is Core Makafal; it is formed by a narrow break in the coast reef, and has good anchorage for buggalows; but neither wood nor water can be obtained. Nearly 2 miles to the south of it is Little Makafal, with a breaking patch 1½ mile to the eastward of it in the channel towards Macowa, which here is nearly 4 miles wide, and forms the best entrance to Dohana.

Macowa Island is 6½ miles long nearly, north and south, and about 1½ broad, at the distance of 4 miles from the coast, and nearly parallel thereto. Its south point is in latitude 20° 44′ N., longitude 37° 20′ E. It is rather high table land, composed of rocky sandstone, in steep cliffs, apparently worn away by the heavy rains. It has a very sterile appearance, there being nothing to relieve the eye, but rocks, barren sands, and innumerable shoals, excepting on the south point of the island, where there are a few mangrove trees. The remains of two rough but dry wells were found on the north end, but no vestige of a tank or any other ruin. The island is surrounded by a coral reef, which extends 3 miles off the north end, and forms the south side of the eastern entrance to Dohana bay. A rocky spit extends a mile off from the south end, with anchorage in 12 fathoms on its S.E. side. Anchorage is also to be had on the west side of it in any depth required. Macowa Island.

Myetta is a small high barren island, 3 miles to the east of Macowa, situated upon the S.E. part of a coral reef, 4½ miles long, and nearly 2 miles broad; it has another small island upon it, 1 mile N.W. of Myetta. This reef extends nearly a mile south of Myetta; and 2 miles S.S.W. of this island is a sunken patch of rocks, and about 4 miles from it, upon the same bearing, is a 1½ fathom patch of rocks. These two patches, which are 1½ mile apart, form the entrance to Macowa from the sea; and the southern high part of Macowa, about W. ¾ N., should lead through between them. There is a channel between Myetta and Macowa Islands, with many sunken patches in it. Myetta Island.

Dohana Bay is formed by Ras Roway and reef, which extends southward from it, from the south extremity of which it runs inland to the N.N.W. nearly 20 miles; the south part or mouth of this bay, is encumbered with small Dohana Bay.

Dohana. islands, reefs, and shoals. The part more particularly called Dohana Bay, is situated on the west side of this extensive bay at the distance of 18 miles N. by W. and N.N.W. from Core Makafal. It has good anchorage, and the water is better than that generally met with on the coast. The well is about a mile from the beach, to which the water casks may be rolled and filled, or the water may be purchased of the natives; but neither fresh provisions nor firewood are to be procured. The eastern entrance to this bay is about half a mile wide, the south part being bound by the reef off the north part of Macówa, and on the north by the extreme point of Red Roway reef; the depth between being 18 fathoms. Having passed this, the breadth increases to more than a mile, but again becomes narrower in what may be called the western or inner entrance, formed by a sand-bank on the N.W. part of Macowa reef and a small island off it: this is also about half a mile wide. After passing through the inner entrance, the soundings will be from 12 to 4 fathoms, until abreast of the third island, where they deepen; but there are many patches for which the eye can be the only guide; having passed the third island and its extensive reef, a course about N.W. will carry the ship to the anchorage at Dohana, which is a little to the northward of a cluster of sandy islands, off which are some rocky patches of 2 fathoms.

Macowa Channel. The Channel inside Macowa, leading to it, is safe, as the patch in the south part of it, off Little Makafal, can be seen, and the soundings decrease towards the N.W. part of that island, affording an opportunity of anchoring conveniently.

The *Benares* through the Eastern Channel to sea. The *Benares* sailed out through the eastern channel from Dohana, and as the channel is intricate and dangerous, it has been thought proper to give an account of the proceedings in their own words:

" May 29. Weighed early this morning from Dohana, and after clearing the islands and patches of 2 fathoms, which are 2 miles from the anchorage, we steered just to the east of the third island (which is connected to the second by the shoal water), and anchored in 7 fathoms, amongst a number of patches off the eastern entrance, and about 1 mile north of the extensive reef off the north part of Macowa Island: the extreme south point of Ras Roway reef bearing E.S.E., and the entrance distant three-quarters of a mile; the extremes of Macowa, S. 10° W. to S. 20° E.

" May 30. Weighed with a light northerly wind, and proceeded through the eastern entrance; in standing out, we had 10, 6, and 5 fathoms, rocks and sand. From thence we worked through a maze of reefs, with deep water between, and in the afternoon anchored under the lee of a reef, on its edge, in 9 fathoms, rocks and sand, about 1 mile to the east of Ras Roway, which forms a bluff on the highest land hereabout."

Ras Roway lies 10½ miles, about N.¼E., from the north end of Macowa Island. Between Myetta Island and Ras Roway there is a continued mass of rocky patches and deep narrow channels, including two small sandy islands, situated to the north-eastward of that island. The easternmost of these, called Oomul Grushe, is 7 miles N.E. by E. from Myetta Island; the other, called Shab Baryer, is 3 miles to the westward of it, and is situated upon the south end of an extensive reef, which runs 4 miles to the northward, and on which the H. C. sloop of war *Nautilus* was wrecked in 1833.

Oomul Grushe. Shab Baryer.

From 1 to 3 miles east of Ras Roway are three small shoals or sand banks, and 2 miles E. by N. of a sandy cape, which is 2 miles to the northward of Ras Roway bluff, there are two dangerous sunken rocks.

Twelve miles N.W.¼W. from the above-mentioned sandy

Shab Kummere.

cape, is the S.E. end of a reef called Shab Kummere, which extends nearly 5 miles N.W., and is only 1 mile off the coast, which, to the south-eastward of it, is steep to. There are a few patches between this shab and the coast, which can be seen by a good look-out.

Eight miles N.W. ¼W. from Shab Kummere, is Core Mishmish; there are two breaking patches about 2 miles off the coast between, and another, considerably larger, about 2½ miles N.E. of the entrance. There is also a dangerous sunken rock, lying at the distance of 6 miles, in nearly the same direction, from Core Shenab, on which the sea breaks sometimes: between these two latter there are no soundings. This is the outer danger hereabout, and is nearly 6 miles from the land; it lies in latitude 21° 25′ 15″ N.

Core Mishmish or Shenab.

Mishmish, or more properly Core Shenab, is 35 miles to the northward of Core Makafal. Ras Roway, situated between them, is considerably to the eastward of these places, and from the sandy cape, 2 miles to the northward of Ras Roway, Core Shenab is 23 miles N.W.½N. This core is formed through a gap in the coast reef, and extends between 3 and 4 miles inland; it is upwards of 200 yards wide at the entrance, with a depth of 30 to 15 fathoms, decreasing as you advance inwards. A vessel may run in with a fair wind, but there is no working room in it. The best mark for this core is Quoin Hill on with two small paps on the highest part of the land within; or it may be found by the breaking patches to the N.E. of it, which will be on with Abboo Hummummah, when bearing N.W. by W.; and from the south part of these outer patches the entrance is to the S.W. 2 miles. There is neither wood, water, or fresh provisions to be had here.

Core Dullow.

Nearly 5 miles to the N.W. of Shenab is Core Dullow, and although it runs nearly as far inland, it is only about

200 yards wide, and is also a gap in the coast reef, having in the entrance from 18 to 15 fathoms. A vessel with a fair wind may run in here and anchor, but there is no room for working. About 2 or 3 miles to the N.E. of this place is a breaking reef, called Shab Dullow, from the south part of which Abboo Hummummah bears W. by N. Shab Dullow.

Abboo Hummummah is a table-topped hill to the northward of Dullow, in a range near the coast, which continues to the southward, and terminates in small straggling hummocks, a little to the southward of Core Mishmish. Haycock Peak is the southernmost but one in the above range. Abboo Hummummah. Haycock Peak.

Quoin Hill is to the northward of the last mentioned: it has a piece of land curiously projecting from its southern brow, which is the highest, and is situated at the upper part of Core Mishmish. Quoin Hill.

The Paps are a notch in the centre part of the highest hill, to the westward of Mishmish. The Paps.

General Description *of the* Outer Reefs *and the* Inner Channel, *from* Suakin *to* Core Dullow.

The land throughout this tract is high and mountainous in the interior, of barren aspect, and decreases in several ranges towards the coast, and at 6 to 10 miles from it, terminates in a broken ridge of hills on a sandy plain, partially covered with short furze and tufts of bad grass, which extend to the sea, without any appearance of cultivation.

The Outer Reefs forming the Inner Channel along this coast are generally 2 and 3 miles from it, excepting in the neighbourhood of Jeseerat Abdullah, Salaka, Duberdabb, and Ras Roway, in the latter of which places they approach within half a mile. The outermost parts of these Outer Reefs.

reefs is twelve miles off the coast, and are in patches, with deep water between.

First Cluster. The first cluster extends from Suakin to four miles to the southward of Sheikh Baroud, or to the parallel of 19° 31′ of north latitude. Between this and the parallel of 19° 36′, or about one mile to the north of Sheikh Baroud, where the

First Outlet. reef again commences, is the First Outlet into the open sea.

Second Cluster. The second cluster of reefs continues so far as the parallel of 19° 44′, or 5 or 6 miles to the northward of Meersa Geehye, and extends about 10 miles off the coast. To the north

Second Outlet. of this cluster is the Second Outlet, which terminates off Mersa Duroor, or in latitude 19° 48′½. These the natives speak of as the principal outlets in this neighbourhood.

Close under some of the above reefs anchorage may be found, but the ports on the coast being only 12 to 14 miles apart, will perhaps, in most cases preclude the necessity of resorting to them. One of these anchorages is between Shab Damart and Mersa Quoih, in 25 fathoms, mud; a second is to the S.E. of Jeseerat Abdullah, in 20 fathoms, mud; a third is to the N.E. of Geehye, in from 9 to 16 fathoms, sand.

Third Cluster. From the outlet terminating off Mersa Duroor, the outer reefs extend in patches to the distance of 10 miles off the land, and cease a little to the southward of Mersa Fedger, or nearly to latitude 20° 0′, the inner part being distant from that port about 2 miles, and from thence is the Third

Third Outlet. Outlet, which extends up to the E. by S. of Owee Terree, or to the parallel of 20° 7′, but there is a rocky patch about 2 or 3 miles from the coast in the centre of it.

The outer reefs continue from the E. by S. of Owee Terree to the northward, and commence in the south part with a shoal called Shab Suady, about 4 miles off the coast, which is upwards of 6 miles in extent, its north ex-

treme being to the eastward of Mersa Arrakea. On the inside of this shoal are many patches of sunken rocks, and the reefs continue in this way to the northward with small channels to the open sea, none of which are frequented or considered safe, until to the N.E. of Arrakea, where there is an opening about half a mile in extent, with some patches of sunken rocks in its neighbourhood, and therefore is not to be recommended, although frequently made use of by the native boats proceeding to Jiddah.

With moderate northerly winds, these boats can reach that port from it, and therefore an interval of one or two days fine weather induces them to take advantage of this opening, in order to avoid the narrow and intricate parts of the Inner Channel off Salaka, and to the northward of that place. When the winds are fresh, it is usual to work from port to port daily on this coast, until up with Macowa, from whence they proceed across to Jiddah.

Anchorages on rocks and sand may be obtained under many of the outer patches between Duroor and Fedger, and on those from Owee Terree to the northward, particularly to the N.E. of Arrakea, under the south part of the reefs in 10 fathoms, rocks and sand. Anchorages.

From the outlet terminating to the N.E. of Arrakea, and which is not here enumerated amongst the principal channels, the outer reefs extend in patches to the parallel of Salaka, or to 20° 26′ of latitude; and three miles to the southward of that anchorage they are more numerous, and approach nearer to the shore, the channel being reduced to the southward of that place to half a mile or less in breadth, with some sunken rocks on the east side of it, which are near the largest reef on that side; and when Table Mound is shutting in with the top of the False Chimney Hill, a good look-out should be kept for them. The first sunken rock is

about a mile to the southward of Salaka, and to the southward of this sunken rock two patches will be seen, which may be passed on either side, but the in-shore channel is the widest. To the N.E. of these, off the end of the largest reef, is another sunken rock.

If the weather is cloudy, it will at times be difficult to discern the sunken rocks and patches: it will then be advisable to remain at anchor at Salaka, or other place about the reefs, until it clears up. If coming from the southward, anchorage may be found in 7 or 8 fathoms, rocks and sand, under the two small patches already mentioned, to the westward of the largest reefs bordering the narrowest part of the channel, about 2 miles to the southward of the sandy spit at Salaka.

Fourth Outlet. Between the parallels of 20°26′ and 20° 31′½N., is the Fourth Outlet from Suakin, being 5 miles broad to the open sea.

From the latter parallel, at 9 miles to the S.E. of Duberdabb, where the reefs again commence, they continue in patches to the northward to latitude 20° 43′. This cluster approaches within half a mile of the coast, a little to the southward of Duberdabb, and the outermost patch called Guttal el Bunna, is 10 miles N.81°E. from Duberdabb, and 9 miles S.58°E. from the sandy point of Macowa Island.

Fifth Outlet. The Fifth Outlet is about 2 miles wide between the two rocky patches lying at 2 and 4 miles S.S.W. from Myetta Island. From the northernmost of these the reefs continue to the northward to latitude 21°3′N., including all those about Macowa and Ras Roway already described.

From the two dangerous rocky patches lying E. by N., 2 miles from the sandy cape, to the northward of Ras Roway, up to the Core Dullow, there are only three small clusters. One is 12 miles N.W. from the sandy cape, and is called

Shab Kummere; it is narrow, and forms a channel between it and the coast, one mile broad, with several small sunken patches in it near to the reef. The second is N.E. of Core Mishmish, or Shenab, and from 2½ to 3 miles off shore. The third is Shab Dullow, lying N.E. of Core Dullow, from 2½ to 5 miles off shore. Between Shab Kummere and the reefs off Shinab, are also 2 small patches. There is also a single sunken rock, lying 6 miles N.E. of Core Shinab.

The COAST *of* NUBIA *and* EGYPT, *from* CORE SHENAB *to the* ISLAND *of* SHADWAN, *at the entrance of the* STRAITS *of* JUBAL.

CORE SHENAB, or Mishmish, is an extensive inlet on the coast of Nubia, in latitude 21° 21′ N., longitude 37° 7′30″E., or 2°7′30″W. of Jiddah by several chronometers, and has already been described in page 173. It was here the Honourable Company's Surveying Vessels, *Benares* and *Palinurus*, commenced their surveys, one to the northward and the other to the southward. This inlet is the southernmost of nine which lie on the coast to the northward of it. Core and Shab Dullow have also been described.

From the outermost dangerous rock to the N.E. of Core Shenab (in latitude 21° 25′ N.), N. 5° 30′ W., and in latitude 21° 39′ N., there is a small dangerous reef, the outer one of several which lie to the westward: this small reef lies 12 miles from the shore, in longitude 37°11′E., and has no soundings near it. From this again the next outer danger is a large reef, of 2½ miles in length, its southern end in latitude 22°0′N., and longitude 37°5′E. Between these two last mentioned reefs there are no dangers, except what lie 3 or 4 miles to the westward, among which

anchorage may be found, as well as at the latter large reef, which is nearly connected with an extensive range of reefs, extending from this to the shore, distant 8 or 9 miles, which here forms a cape, with a range of small hills on it.

Elba Cape.

This cape I shall name Elba Cape, from a range of conspicuous high mountains in the interior, called by the natives Elba, distant from the cape 24 and 25 miles. The southern and highest hill on this range, is by measurement 6,900 feet elevation. I have called it South Peak: it is in latitude 21°53′N., and longitude 36°33′45″E.

Elba Mountains.

South Peak.

Between Elba Cape and Core Shenab, any of the inlets on the coast afford good anchorage for ships, taking care to avoid the numerous detached reefs off the coast 3 or 4 miles; even under many of these reefs anchorage is to be got, the eye sight being your guide.

Elba Cape is in latitude 22° 3′ 30″ N., and longitude 36° 56′ E.

From the outer large reef off Elba Cape as just described, (in latitude 22° N., and longitude 37° 5′ E.), draw a line at N. 36° W. to latitude 22° 53′ 45″ N., and longitude 36° 22′ E.; this point is the eastern and outer extreme of a very large reef 3 miles from east to west, and it is the southern and outer reef of what was formerly called in the old charts Foul Bay, but it is named by the natives Shab Aboofenderah. It has anchorage on its south side, but studded with numerous small patches of rocks: there is also a small rock about 20 feet high on its eastern extreme, probably the remains of an island, the other part being washed away. Having drawn the line between Aboofenderah reef and the outer reef off Cape Elba, it just touches the outer reefs between these two points, extending and detached from the shore. Their positions remain to be described, as follows: one small reef latitude 22° 10′ N. 2 miles to the west of the

Shab Aboofenderah.

line, and the same distance from the shore: in latitude 22° 15′ 30″ N., one mile to the west of the line and 5½ miles from the shore are two small reefs: in latitude 22° 35′ 30″ N., just on the line, is the outer reef of a group, on a bank of soundings, extending 20 miles to the N.W., as far as the Seeall Islands; these reefs are very dangerous, having numbers of detached rocks about them; however, if a small vessel is in want of anchorage she may find shelter under most of them. The coast from Elba Cape is low near the sea, gradually rising inland, it takes a N.W. direction to a coral cliff cape, of moderate elevation, called Raz Juzreeal; Juzreeal. there is an excellent harbour close to the southward of this cape, called Merza Helaib. A vessel wishing to anchor Merza Helaib. there must haul close round a sandy island, nearly attached to the cape, and then haul up to the northward between a reef and the island; the passage is narrow, but when clear of the reef you may stand to the S.W. into a beautiful harbour, where a vessel may anchor in 5 or 6 fathoms, one quarter of a mile from the shore. Good water is to be procured here at some wells about 500 yards from the beach; firewood in plenty; sheep are also numerous, and to be obtained from the natives, who are civil and obliging. The coast from Ras Juzreeal takes a direction N. 48° W. to latitude 22° 40′ N., which is due south from the Seeall Islands; to seaward is studded with innumerable reefs and rocks.

Elba Island, a small low coral island, in latitude 22° 24′ N., and longitude 36° 34′ E., is situated on the body of an extensive reef, or reefs, by which it is surrounded; anchorage may be found on some spots, or breaks, in this reef, but sunken rocks are numerous about it. Elba Island and reefs.

The Seeall Islands are three in number, low and sandy, Seeall Islands.

and partly covered with bushes; they are between eight and nine miles from the nearest part of the coast, surrounded by numerous rocks and reefs, with intricate passages among them. The eastern Seeall Island is the largest, being about 2 miles long from east to west; these islands are the residence of numerous fishermen of the Hootainy tribe; the large island is in latitude 22° 47′ N., and longitude 36° 17′ E., and can be seen at times from the large reef Aboofenderah, 7½ miles N.E. by N. from Seeall Island.

St. John's, or Seberget Island.

St. John's Island, or Seberget by the natives, in latitude 23° 36′ 20″ N., and longitude 36° 14′ 30″ E., is a small high island, of about 700 feet elevation, and of a circular form; the hill in the centre of the island forming a remarkable sharp peak of volcanic origin; this island was formerly famous for its emeralds, but now is the lonely abode of one or two fishermen, who are constantly on the look-out for turtle, which are very numerous hereabouts, and valuable from their shell. The island neither affords water or vegetable production, being dreadfully barren; it is steep on all sides, having no soundings near the band of coral reef which surrounds it, or, more properly speaking, which constitutes its base. During the survey of the Red Sea, the Hon. Company's surveying vessel, *Palinurus*, held on this island during a northwester, by hooking the kedge anchor to a hole in the reef, and making fast to it. Three miles to the south-eastward of St. John's, there is a small steep rocky island, with no soundings near it.

Rocky Island.

Foul Bay, the southern point which lies to the west of St. John, and to the N.W. of Aboofenderah Reef; this place is full of reefs and sunken rocks, a line drawn N. 51° 48′ W. from Aboofenderah Reef in latitude 22° 53′ 45″ N., and longitude 36° 22′ E., touches the outer boundary of reefs to the N. W., till this line is crossed by another drawn

from St. John's, S. 43° 30′ W. This last line clears the reefs to the west. St. John's Reef lies in latitude 23° 26′ 20″ N., and longitude 36° 4′ E., or 14 miles to the S.Westward of the island; others lie to the S.W. and west of this outer reef. A line N. 21° W. from this outer reef, clears to the eastward 3 and 4 miles the outer boundary of the reefs in the northern part of Foul Bay, which is bounded on the north side by Macour Island and promontory of Ras Benass. St. John's Reef.

Macour, or Emerald Island, bears from St. John's N. 56° 32′ W. distant 23½ miles, and is in latitude 23° 50′ N., and longitude 36° 52′ 30″ E., and distant between 3 or 4 miles from the low sandy cape at Ras Benass; the island is small, not being above a mile in length, and about 100 feet high in the centre, composed of one mass of coral, and affords no anchorage, bottom not being found. It is surrounded by a coral reef, which, off the N.W. end, extends half a mile from the island. Macour, or Emerald Island.

Ras Benass:—the body of this cape, on which are some moderately elevated hills, lies in latitude 23° 56′ N. and the outer extreme of the cape, in longitude 35° 52′ E., is a low sandy point running out to the south-eastward. On the east side of the cape there is no bottom at 30 fathoms close to the shore; on the western side there is an extensive reef running off to the southward, as far as the parallel of Emerald Island; off the extreme point of the reef are numerous small reefs and rocks, with irregular soundings between them, from 8 to 30 fathoms. The channel between this reef and Emerald Island is 1½ miles broad, with overfalls from 7 to 12 fathoms rocks. A vessel coming in through this channel must be cautious not to come too close to the sunken rocks and reefs off the cape, till in deep water; she may then work up to the anchorage N.N.E. to Ras Benass. Cape Reef.

Anchorage in Ras Benass Bay.

the head of the bay, and anchor in 10 or 12 fathoms, about 1 mile from the shore, well sheltered from all winds, the low sandy cape off Ras Benass S.E. ½ E., distant 3 and ¾ miles. In working up care should be taken not to come too near to the low sandy cape, on account of the numerous rocks near it. From this anchorage, 13 miles west in the bay, is a small sandy island situated in the bight; on the west side of this there is good anchorage in 7 and 8 fathoms rocks. On the mainland near the anchorage, are some ancient Egyptian ruins nearly covered with sand, and supposed to be the remains of the city of Berenice.

Anchorage.

Near the beach in Foul Bay is a range of high remarkable peaked mountains called Berenice Mountains, which are seen some distance at sea; the northern and highest one of this range is 4,440 feet high, and lies in latitude 23° 34′ 15″ N., and longitude 35° 25′ E.

From Ras Benass the coast runs W.N.W. 7 or 8 miles to a point, off which there are two small reefs, distant from the point about 2 miles; the land there forms a deep bay, having no soundings near the shore. In latitude 24° 9′ 45″ N., and longitude 35° 45′ E., there is a large reef called the Fury Shoal, and several small ones to the northwest, the outer one distant from the main 9 or 10 miles. There is anchorage in 6 or 7 fathoms rocks, on the south part of Fury Shoal, but it is very bad holding ground, and difficult to approach, being studded with small rocks.

Fury Shoal.

Indifferent anchorage.

From the Fury Shoal a line north 31° 20′ W. clears all the dangers, which extend only a few miles from the coast of Egypt to Cosire, and will be mentioned as follows:—to the W.N.W. of the Fury Shoal, and on the main land there is good anchorage called Merza Waddy Lehuma, in latitude 24° 12′ N., in 7 or 8 fathoms; under the lee of a low point, off which a narrow reef projects to the southward,

Merza Waddy Lehuma.

between which and the main a vessel may anchor. E.N.E. of this anchorage 9 miles, in latitude 24° 13′ and 24° 14′ N., and longitude 35° 39′ 30″ E., there is a cluster of small reefs, with no soundings close to them; and 9 or 10 miles to the N.W. is another cluster, with numerous detached rocks in the channel between them.

Mehabeese, or South Island, is the southernmost of four low sandy islands, situated near the main land, and lying nearly north and south from each other. South Island lies in latitude 24° 19′ N., and longitude 35° 17′ E., distant from the main, to which it is joined by an extensive reef, 1½ mile. These islands, the northern one of which, called Seeoul, is in latitude 24° 23′ 30″ N., are surrounded by extensive reefs, with narrow passages between them, which are studded with rocks. Along the outer or eastern edge of the reef there is no bottom at 30 fathoms close to the rocks. To the southward a vessel may anchor in 8 or 10 fathoms water between South Island and the main: there are two small reefs to the S.E. of South Island, about 1 mile distant, and two small patches E. by S. 3½ miles.

Mehabeese, or South Island.

Seeoul Island.

Anchorage within South Island.

In latitude 24° 12′ N., and in longitude 35° 4 ½′ E., is a remarkable high mountain, the peak of which can be seen, in clear weather, 90 or 100 miles, and is frequently seen in passing up the centre of the sea. In latitude 24° 29′ 30″ N., and longitude 35° 22′ E., is a small reef, with several sunken rocks near it, 4½ miles from the shore, and 3 miles from the northern extreme of the reef joining the four islands to the south-eastward, with overfalls from 14 to 30 fathoms, between the patches of rocks. Ras Oomul Abbas, in latitude 24° 33′ N., is a low point, to the southward of which there is indifferent anchorage under its lee, close to the shore, in 10 fathoms, and good shelter from the N.W.: it lies nearly south from the Island Waddee Jumaul, distant

6 miles, and can be easily known by a remarkable sugar-loaf hill close to the beach, which is 3 or 400 feet high.

Sherm Sheikh. Sherm Sheikh, in latitude 24° 36′ 30″ N., and 4 miles S.W. of the south point of Waddee Jumaul Island, is a cove in the main land, the entrance to which is about 200 yards broad, the anchorage capacious at the further end in 10 fathoms sand and mud. Wood can be procured here close to the anchorage.

Good anchorage.

Waddee Jumaul Island. Waddee Jumaul is a low rocky island, in latitude (the centre) 24° 39′ 30″ N., and longitude 35° 13′ 30″ E., 2½ miles in length N.W. and S.E.: there is an extensive coral reef off the north end. The channel between the island and the main is dangerous, being full of small reefs and patches of rocks; off the south point there is a spit of shoal water, on which a vessel may anchor in 8 or 10 fathoms sand and rocks, with the centre of the island bearing north. E. by N., from the island 5 miles, is a dangerous sunken rock, and another to the northward of the island 5 miles. With the island bearing S. ¼ W. 7 miles, there is a small shoal in latitude 24° 46′ 30″ N. The coast about this part ought to be approached with caution, when within 15 miles of the land, as far as 25° of latitude.

Anchorage.

Dangerous rocks.

Shoal.

Ras Doorah. Ras Doorah, in latitude 24° 53′ N., and longitude 35° 2′ 45″ E., is a low point of the main, with a long reef running parallel and close to it. To the north of the cape, 4 miles, there is a dangerous rock, and several other detached rocks, E.S.E. 8 miles; this part is dangerous for ships. Mirza Toondebah, in latitude 24° 57′ N., and longitude 35° 0′ E., is an anchorage close in shore, where a vessel may anchor in 10 fathoms, under shelter of a low point, and a small reef projecting from it. E.N.E. 3¾ miles from this anchorage there is a small reef, with anchorage on its S.E. side. In latitude 25° 4′ N., and longitude 35° 0′ E.,

Mirza Toondebah.

Anchorage on a bank.

there is a reef 2½ miles from the shore, on the southern extremity of which a ship may anchor in from 10 to 18 fathoms, well sheltered from N.W. winds. In latitude 25° 12′ N., and longitude 34° 52′ 30″ E., anchorage will be found in a small, narrow cove, called Mirza Zebara, the entrance not more than 100 yards broad, but perfectly sheltered; to the northward of this lies the Elphinstone Reef, formerly discovered by Lieutenant Denton, in the *Palinurus*, in 1827, in longitude 34° 55′ E., and latitude 25° 18½′ N. To the W.N.W. of this reef, 5½ miles, is indifferent anchorage, on the main land in Mirza Debah, between which and the Elphinstone Reef are several shoals and rocks, 3 miles from the shore. Mirza Mombaruck, a good anchorage in latitude 25° 30′ N., and longitude 34° 43′ 15″ E., is a small bay, with soundings of 6 and 7 fathoms inside. Care must be taken in anchoring, as there is a sunken rock in the middle of the bay, visible from the fore-yard. Ras Humroo is 4 miles N.W. of this, and is a bluff red cape. Mirza Trombee, in latitude 25° 42′ N., and longitude 34° 38′ E., is an anchorage in 7 or 8 fathoms, a little sheltered from N. Westers by a low point of the main: to the northward of the point are two small shoals close in shore, with soundings of 17 and 20 fathoms near them, as well as 3 miles to the eastward and N.E.

Good anchorage.

Mirza Zebara

Elphinstone Reef.

Mirza Debah.

Mirza Mombaruck.

Ras Humroo.

Mirza Trombee.

Ras Aboohadger, in latitude 25° 58′ N., and longitude 34° 27′ 30″ E., is 11 miles below Cosire, bearing S. 34° E. from the town. Off this cape there are two sunken rocks, distant from the shore 1 mile. There is a black hill, shaped like a cone, standing among a number of low sand-hills, about 3 miles in shore, which bears from the rocks W. 30° S.

Ras Aboohadger.

Cosire, the town, in latitude 26° 6′ 50″ N., and longitude 34° 21′ 30″ E., is small, and contains about 2,000 inhabi-

Cosire.

tants: the houses are low, and built on a sandy point, projecting a little from the line of coast: a small Turkish fort occupies the more elevated ground at the back, or land side of the town, and can be seen by a ship at sea 10 or 12 miles distant. The coast, 8 or 9 miles north and south of Cosire, is very low; and a long line of moderately elevated hills, 5 or 6 miles inland, present no prominent marks to guide a ship into the port, more particularly at night time. A large hill, or distant high land, of about 4,500 feet elevation, is the most remarkable; the N.W. brow of it is the highest part, and bears from the anchorage S. 18° W., distant 19½ miles; this hill can seldom be seen at night. Should a ship, making this port, not be certain of her latitude, it would be better to make the Brothers (hereafter described), and then, if N.W. winds are blowing, stand in for the coast, 7 or 8 miles to the northward of the port, then bear up close along it. A ship cannot be too careful not to get to the southward of the port; this has frequently been the case, and a few miles to the southward has taken 3 or 4 days to beat back; for when N.W. winds are blowing, a continued drain of current and heavy swell sets along, and some distance from the coast. If a ship by accident should get to the southward, she had better stand over to the coast of Arabia, and make her Northing there, than short tacks on the Egyptian coast. If a vessel makes the port at night and does not intend to anchor, she ought not to heave to, but keep off and on under topsails, or she will drift to leeward. Should the wind be light, she may anchor on a small patch of soundings from 15 to 17 fathoms sand, which bears from the fort E. by N. 1½ mile, between which and the anchorage in the roads there are soundings of 45 fathoms. In anchoring at Cosire, the best place is close to the point of the reef forming the roads. Should the wind blow hard from the N.W., she

Remarkable hill.

How to make the port.

How to proceed with N. and N.W. winds.

How to anchor and moor at Cosire.

may, by placing a grapnel on the reef, haul close up to it by a hawser, similar to the native boats, in a line of S.S.W. from the point of the reefs; the sand in the roads is shoal, having only 1½ fathom water on it. Having anchored near the reef, another bower anchor ought to be let go to the S.S.Eastward, in case the wind should change to the southward, from which quarter it seldom blows hard, and there is little danger with a long scope of cable, and as the ground holds well, being sand at top and clay underneath. This place, in a few years more, will not afford shelter for boats which are daily arriving to carry away the immense quantity of grain for Arabia; bringing as ballast a quantity of sand, which they are allowed to throw overboard into the roads, and is fast filling them up. The variation of the compass at this place is 8° westerly; high water full and change 6 hours; rise and fall 3 feet. Easterly winds are not to be dreaded here; being the sea breeze, they are only light and pleasant, and bring with them little or no swell.

Variation of the compass, and time of high water.

The Brothers are two small coral islands, situated in latitude 26° 21′ 25″ N., and longitude 34° 54′ 30″ E., and bear from Cosire N. 64° 00′ E. about 33 miles distant; they are steep all round, and have no soundings between them; they may be seen 10 or 12 miles off. The coast to the northward of Cosire forms a straight line N.N.W. ½ W. and S.S.E. ½ E. as far as latitude 26° 45′ N. is safe to approach and clear of dangers, except off one small anchorage called Gouay.

The Brothers' Islands.

A line from the outer roads of Cosire drawn N. 14° 28′ W. clears all the dangers on the coast of Egypt to the northward as far as the Jaffateen Islands; to the northward of which has been included in the Straits of Jubal.

Gouay is a small Bedouin village, in latitude 26° 21′ 30″ N., and longitude 34° 13′ E. Here is good anchorage for small craft close to the shore, among a cluster of small

Gouay village.

Good anchorage.

reefs and rocks, in 4 or 5 fathoms. Off this place are several dangerous reefs, with soundings between them and the shore; they bear from the anchorage N.N.E. 2 and 3¾ miles, and lie in latitude 26° 23′ 30″ N., and 26° 25′ 00″ N., and from 2 to 3 miles off shore, with soundings about them to the north and N. E. 2 miles. The coast is then clear as far as Safadger Island, between which and a low woody point of the main, called Safadger Ulbur, are 3 small reefs in latitude 26° 40′ N., and the outer one in longitude 34° 7′ 30″ E.

Safadger Island.

Safadger Island, 5 miles long S. by E. and N. by W. and 2 miles broad at the northern part, lies between latitude 26° 43′ 15″ N., and 26° 48′ N., the body of it in longitude 34° 2′ E. The south end is a long, low, sandy point, and on the north end is a remarkable table-hill about 150 feet high. E. 7° 12′ S. from this hill, distant 4¾ miles, lies a dangerous

Coral Reefs.

coral reef about ¼ of a mile in extent, with no soundings near it, in latitude 26° 46′ 30″ N. Two other reefs lie to the S.S.E. of this last-mentioned reef, one distant 2 miles, the other 4½ miles, and is 6 miles off shore. This last reef is the outer danger near Safadger Island, and is called

Shab Shear.

Shab Shear, and is in latitude 26° 42′ N., and longitude 34° 9′ 15″ E. Safadger Island is situated in the centre of a deep bay, in which there is good anchorage both to the northward and southward of the island: the soundings are very irregular, from 5 to 25 fathoms sand and rocks. The best anchorage in this part of the bay is near the south point of the island: from the main an extensive reef projects out, and extends to the southward as far as the low woody

Safadger Ulbur.

point called Safadger Ulbur. The channel between the island and the main gradually decreases, until it becomes not more than 200 yards broad, and the depth of water 3 fathoms: it then increases until you pass the island, and enter the northern bay. The east side of the island is lined

by a narrow reef, with no soundings at 30 fathoms close to it: off the north end a narrow reef projects in prongs to some distance. Between this reef off the north end of the island and the islets joining Ras Aboosomer, is the channel into the northern bay; but there is a shoal in the middle of the channel, which bears from the table-hill on Safadger due north, distant 2¾ miles. In the upper part of this bay there are three small islets, two of which are connected together by a reef; haul round the outer of these two islets, and a vessel will find good anchorage between them and the main. The soundings are irregular, from 7 to 25 fathoms, sand and clay: the bay is sheltered from all winds. The channel between the above islets and reef is a mile and a half broad. Ras Aboosomer is in latitude 26° 52′ N., and due north from Table Hill on Safadger Island: this cape forms the north extreme; it is rather high and safe to approach, having no bottom at 30 fathoms close to the shore.

Ras Aboosomer islets.

Directions for the anchorage.

Ras Aboosomer, of the northern bay.

Sayel Hasheesh, two small islets, the largest in latitude 27° 3′ N., and longitude 33° 58′ 30″ E., lying in the centre of a small bay formed by Ras Korah Bobah; there is anchorage in 10 fathoms close to the northern point of the bay, affording good shelter from the N.W. and northward.

Sayel Hasheesh islets, or Aboo Mokhudige.

The Jaffatine, or Jaffateen Islands, are 5 in number, the southern part of the largest being in latitude 27° 12′ N., and longitude 34° 1′ 30″ E. The Great Jaffatine is a long, narrow island, moderately high at the north part, its length about 5½ miles; between it and the main is a low woody island, called Aboo Mungarah, to which it is joined by an extensive reef, which extends off the north point of Great Jaffatine, in several prongs. The passage between it and Ras Salam (the point of the main) is not more than a quarter of a mile broad, and the soundings in it are extremely irregular; in passing through it in the Honourable Company's

The Jaffatine Islands.

Great Jaffatine.

Aboo Mungarah.

Ras Salam.

surveying brig *Palinurus*, we frequently had 25 and 30 fathoms, then 6 and 7 fathoms the next cast. The reef projects off the western side of the Great Jaffatine and gradually shoals towards it, on any part of which there is good anchorage in 5 or 6 fathoms sand.

Good anchorage.

Little Jaffatine.

The Little Jaffatine is a small but rather high island, lying close to the eastern side of the Great Jaffatine; there is indifferent anchorage close to the southern end of the channel between the islands in 10 or 12 fathoms rocks. A small island, called Aboo Tamalah, bears S.E. from the south end of the Great Jaffatine, distant 1½ mile; it is steep all round. There is a dangerous patch of rocks close to the south point of the Great Jaffatine, and another patch to the S. W., distant 1½ mile, or due west from Aboo Tamalah 2 miles, with soundings about them. There is also a small coral reef S. 5° W., distant 2¾ miles from the south point of the Great Jaffatine, having soundings about it; between this shoal and the main, nearly in the centre of the bay, is a small, low island, called Mugomish, having an island on its S.W. point, and a spit of sunken rocks bounding its S.W. side. Between this island and the main is an extensive reef in mid channel, in the extensive bay formed by the islands and Cape Korah Bobah, the southern point of the main. There is no bottom in mid-channel, and irregular overfalls as you approach the shore and islands. From the Jaffatine Islands to the northward the coast forms a deep bay as far as the Sea of Zeitee.

Aboo Tamalah.

Mugomish Island.

Gulf, *or* Sea *of* Akabah.

This part of the Red Sea, so little known formerly, has now been found to afford no advantage for a sailing ship: the advantages which might offer for steamers, in landing

their packets at Akabah, is in a measure counteracted by the almost constant and violent northerly winds which prevail here. These winds are drawn to the southward by a very high range of mountains, bounding close both sides of the sea, and opening like a funnel to the northward in Syria; from which cause the cooler atmosphere of the northern regions is drawn into this part with such violence that it raises the sea into a deep and turbulent swell, so that no vessel could make way against it; the place also is void of soundings and anchorages, except one or two spots. No native vessels ever navigate this sea, and such a dread have they of this place, that in crossing the Red Sea, near the Sea of Akabah, the Arabs always offer up a prayer for their safety. Numerous vessels have been lost hereabouts, and when trying to survey it, four attempts were made before we succeeded in the Honourable Company's surveying vessel *Palinurus*, having been blown away three different times, once at anchor, having two bowers down, with 50 fathoms of chain on each.

Prevalent violent winds.

Difficulty and danger of navigating.

The entrance of the Sea of Akabah is nearly shut up by the island of Tirahn, and the extensive reefs connected with, and extending to, the east and west of this island, leaving one small channel to the west of Tirahn, one mile broad, and no soundings at 70 fathoms in it, called the Straits of Tirahn; and one to the N.E of the island, one quarter of a mile broad. This is the best and safest channel, having anchorage throughout, which leads up to Ras Furtuk, the east point of the entrance to the Sea of Akabah: under this point there is good anchorage, and here a vessel may remain till the winds allow her to proceed up the gulf. At this point it is 7 miles broad, in latitude 28° 6′ N.; the sea then widens considerably, and the first anchorage is on the eastern shore, in a snug cove, with a narrow entrance,

Entrance to the gulf.

Straits of Tirahn.

Best entrance.

Ras Furtuk and anchorage.

between 6 and 7 miles from the point last mentioned: this anchorage is called Sherm Mujowah. Five miles further good anchorage will be found in Sherm Dubher. From this there is no anchorage on the eastern side till in latitude 28° 51′ 30″ N., which is about 10 miles north of a bluff headland and high mountain, called Tybut Issum, which bounds the view on the east side, when seen from the lower and upper part of the gulf.

Sherm Mujowah and Dubher.

Tybut Issum bluff.

Dahab, or Mersa Dahab (*i.e.*, the Golden Port), probably the Eziongeber as mentioned in Scripture, is on the western side, or peninsula of Sinai, in latitude 28° 28′ N., and longitude 34° 37′ E., and N. 4° 56′ W., distant 33 miles from the Peak on Tirahn Island, and nearly east 29 miles direct from Mount Sinai. This point is formed by a sandy point, extending out from the line of coast nearly two miles, on the outer extreme of which is a large date grove: among the trees indifferent water is found in some wells. Near the date trees is a small bay or anchorage, affording shelter enough for boats; it is named Minna, but the anchorage for ships is on the south part of the cape, where the sandy point forms a horse shoe shape to the westward. In this bay a vessel may anchor in 6 or 7 fathoms, perfectly sheltered from all winds. The date grove at Dahab is inhabited during the fruit season; but the Toorwarree Arabs return before the winter months for pasture in the valleys of the immense mountains, in the dreary peninsula of Sinai. The sandy points are all formed by the torrents, which at times wash out the sand from some of the larger valleys.

Dahab.

Minna.

The next anchorage is on the same side, about 7¼ miles to the N.N.E. of Dahab, under the lee of a sandy point, called Rasarser. A bluff cape projects out, called Windy Cape, but there is no anchorage there.

Rasarser.

Nearly north of this cape, 7 miles, is Warsut, a low,

Warsut.

sandy point, in latitude 28° 50′ N.; here is good anchorage from northerly winds.

E. 6° 40′ N. from Warsut, distant 8¾ miles, is an anchorage under a sandy point, called Beer ul Marshy, in latitude 28° 51′ N.: a small patch of rocks surrounds this point, and extends a little to seaward, having deep soundings 1 mile off shore; there is good anchorage under this cape in 5 or 6 fathoms, well protected from northerly winds. Beer ul Marshy.

Noweeby, a low sandy point on the Sinai side, with a large grove of date trees on it, is 7 miles to the northward of Warsut, and about 10 miles to the north-westward of Beer ul Marshy; it is in latitude 28° 56′ 30″ N.: this spot affords good shelter from northerly winds, and indifferent water may be obtained among the date trees, where there are some wells. Noweeby.

Aboo Rumlar, the northern point of a small bay, about 13 miles above Noweeby on the same side; this is the next anchorage, and is sheltered from northerly winds. It lies in latitude 29° 8′ N., and will be known by having a white patch or land drift on the lower hills, 2½ miles to the N.N.E. of the cape. Aboo Rumlar.

Between this cape, or white patch, and the island called Juzerat Faroun, or Pharoah Island, near the head of the sea, there are three different anchorages from N.E. winds on the Sinai side; the first is north of White Cape 2 miles; the next north, a little easterly, 7½ miles from White Cape; the third N.N.E. about 11½ miles, all in small bays. The distance from White Cape to the opposite shore is 9 miles, where there is a small bay, with an island in the centre of it, called Omaider Island; there is good anchorage between the island and the main, but like all other anchorages, excepting Dahab and Mujowah Cove, is exposed to the southerly winds, which sometimes, in the winter months, Three anchorages. Omaider Island.

change suddenly, and blow violently for a day or a few hours.

Juzerat Faroun, or Pharaoh Island.

Juzerat Faroun, or Pharaoh Island, about ¼ mile long and 300 or 400 yards broad, lies in latitude 29° 24′ 30″ N., and from the fort and village of Akabah W. 25° 40′ S., distant about 8 miles: the Island of Faroun is a barren rock, surrounded by an old Saracenic castle now in ruins. In this castle are the remains of capacious water-tanks, all out of repair; this fortification occupies the whole of the top of the island, and has once been a strong place: it is situated about 400 yards from the main land, between which and the island there is good anchorage in 10 fathoms sand and rocks. The Arabs at Akabah will bring supplies to this place in five or six hours, but they are not to be trusted.

Akabah village.

Akabah is a small Arab village, in an extensive date grove, nearly at the head of the sea; close to the village there is a small square fort, garrisoned by 25 Turkish soldiers from Egypt: this is a depôt for grain, used by the caravans on their way to, and return from, Mecca. The fort is in latitude 29° 28½′ N., and longitude 35° 6′ E.; near the fort and adjacent country are numerous ruins, which we had not an opportunity of examining. From the fort of Akabah the head of this sea forms a circular bay, 3 miles to the northward and N.W., and the same distance across, but abreast of Faroun Island it is nearly 7 miles broad; the coast at the head of the sea is very low, being a sandy valley, called Waddy ul Araba, bounded on each side by high mountains. At the head of the sea there is good anchorage from northerly winds, and fresh water may easily be obtained by digging a few feet close to the beach; in anchoring at this place it must be recollected that southerly winds bring up a heavy swell.

Shoals, *&c. in the centre of the* Red Sea.

Centurion Shoal, mentioned by Horsburgh to be situated in latitude 25° 20′ N., and longitude 35° 56′ E.

It certainly does not exist in this situation, or near it; having been on the spot assigned to it, and often about it, nothing has been seen. Once when on the situation assigned to it, a shoal was reported from the mast-head, and it was not until we sailed over the spot that we found it was not a shoal, but a strong rippling, caused by currents; appearing in light winds exactly like a shoal. When in the rippling we sounded 200 and 400 fathoms, but found no bottom; on the north side of this rippling, which extended several miles to the N.E. and S.W. in a narrow line of breakers, we found the current setting to the S.E. one quarter of a mile per hour, and on the south side of the rippling 1½ mile per hour to the N.W., the wind then very light or nearly calm. This appearance, so deceitful to us, having been three years constantly in sight of coral shoals, at once proves that former navigators must have seen the same, and placed them down as shoals, without examining them; which fully accounts for the numerous dangers in the old charts. None of the Arab pilots have any oral information of this shoal, or do they believe it to exist; the Dædalus Shoal being the only one known to them.

Strong current, with rippling.

Dædalus Shoal, or Reef, is a small reef nearly in the centre of the sea; it lies in latitude 24° 56′ N., and in longitude 35° 56′ 30″ E., by observations taken on it by an artificial horizon; and in one day's run by three chronometers, 42 miles east of the south end of Waddee Jumaul Island on the coast of Egypt, also 1° 26′ 30″ W. of Sherm Hussay, by chronometers. There are no soundings alongside the shoal, and, to obtain observations, the Hon.

Dædalus Shoal, or Abdul Kheesan.

Company's surveying vessel *Palinurus* hooked on to it during the warm weather in the Red Sea, when its waters are much lower than in the months from October to May. A sand-bank of several feet high is formed on this reef, (but is yearly washed away when the sea rises, and the winds blow strong). This is the only reef in the centre of the Red Sea, and is called by the natives Abdul Kheesan.

The Centre Channel of the Red Sea.

The centre channel between the outer extremities of the reefs extending off the Arabian and Abyssinian shores is very deep throughout, as we have sounded from 70 fathoms to upwards of a quarter of a mile, or 260 fathoms, without getting bottom.

This channel, in the parallel of Jiddah, is 110 miles broad; from 20° of latitude on the Arabian side to 19° of latitude on the Abyssinian side, its breadth is about 70 miles. From the outer extremity of the mud soundings on the western part of Doharab, until soundings are again obtained on the eastern part of the Dhalac banks, the extent of deep water is not much more than 40 miles; and to the southward of Camaran, the deepest part of the channel, where we could not obtain soundings, is reduced to a narrow strip by the sand and mud soundings obtained off both sides of the sea; and from thence the narrow strip of deep water in an irregular form may be traced to the Straits of Bab-el-mandeb.

Inner Channel; Arabian side, south of Jiddah.

This inner channel, from Jiddah to Leet, is formed by numerous sunken rocks, breaking patches and reefs, the south-westernmost of which is called Gad Amaze; and

the coast is bound by coral reef. It is generally narrow until past Kishran, from whence is an open channel to sea, bound on the north by Gad Amaze, and on the south by the north part of an extensive bank of reefs and islands, running from thence to the southward. Within the above space the channel is only 2 and 3 miles wide, has very deep water, with some patches, and very indifferent anchorages, being mostly stopping places for boats, formed by breaks in the coast reef or rocky patches off it, affording little protection from the sea, even for buggalows. There are no towns on this part of the coast, nor any supplies procurable.

From Leet to Camaran the coast is generally bordered by coral reef, and the inner edge of the outer reef is formed by extensive sunken rocks, dangerous patches, and small islands, with deep water close to them, between Leet and Seraane Island; but, after passing the latter, it is generally clear, with good anchorages, though there are many sunken patches in it. A little north of El Burk the channel is contracted to 1 and 2 miles by a bank, called Ome Kergane, the north part of which is very shoal, but there are 2 and 3 fathoms on other parts. After passing this bank, which is extensive, the channel becomes comparatively open.

The best entrance from seaward is to the west of Leet; there is one between Loban and Entookfash Islands, over the tails of the banks (see page 22); a third between Ockbane and Camaran Islands (page 20). The south entrance to the inner channel is between Camaran Island and Ras el Bayath, being no more than 700 yards wide between the latter and a reef which extends towards it from the island. The boats sail night and day through these channels.

The principal places within this space are Leet, Coomfidah, Gheesan, Loheia, and Camaran.

Inner Channel, African side.

This channel is similarly bound as that on the opposite side, and ends at Dhalac Islands and Bank to the southward. The Island Bolhessoo, which bears N. by E. ½ E. from Ras Unduddah, distant 24 miles, may be considered the south entrance. The north entrance of this channel may properly commence at Macowa, though this description extends it to Core Dullow, from whence to Suakin the channel is generally from 1½ to 3 miles wide, except in the neighbourhood of Salaka Duberdabb, and Ras Roway, where the limits are half a mile. From Macowa to Salaka, which is the most intricate part of the channel, there are generally soundings, but in all other parts deep water.

From a little below Suakin the channel becomes wider, passing outside the extensive shoals in a bight of the coast south of Trikatatah, which is above 20 miles below Suakin, and soundings will generally be obtained; but, excepting the harbours on the coast, there are few places where ships would prefer to anchor, the bottom being generally rocky with great overfalls. In most of the anchorages north of Suakin it is advisable to moor the ship; and in many places it may be considered prudent to lay out, in blowing weather, the stream anchor on or near the weather beach.

There are several entrances to this channel from seaward, the best of which, north of Suakin, is off Sheikh Baroud. There is also a wide one north of the Dhalac Banks, but several patches are in it, most of which will

be seen by a good look-out. There are also channels out to seaward over the Dhalac Bank to the north of Untoentore Island, but none below it, excepting the south entrance, bound by Ras Unduddah and Dhalac Island reefs already described.

The principal places on the Abyssinian coast in the above space are Suakin, Core Nowarat, and Massowah.

Channels from the Centre to the Inner Channels.

In the channels amongst the islands and shoals there is very deep water to the north of 17° N. latitude; but from thence to the southward, from the northern extremities of the Dhalac Banks on the Abyssinian side, and Shab Farsan and islands on the Arabian side; soundings may be obtained; those parts being composed of very extensive banks, with shoal water and moderate depths, intersected by narrow channels of mud with deep water.

In prosecuting the survey, we have been in the Honourable Company's ship *Benares* from the nature of the duty, amongst all these islands, reefs, and banks, where the depth of water permitted, excepting that part on the Arabian side to the south-west of Aboo Laad Island, and also immediately above and below Sabyar and Gootna Islands, which was found too dangerous. I think few navigators will frequent the channels amongst the islands and reefs on the broadest parts of the banks to the north of 17° of latitude, on account of the deep water and great distance of either coast; which render it probable that they would not be able to procure anchorage before night-fall, and therefore would be obliged to heave-to amongst the reefs and islands for the night. But we

used to make fast to the islands by hooking a grapnel on to the reef off them, and haul the vessel close up, and send the stream anchor on shore: twice the wind falling light, the eddy laid the ship's broadside close to the reef. On one occasion we veered clear, and on another set the sails to keep her off, but at last were obliged to get the anchors on board, and heave-to for the night.

The country boats make fast to the islands and reefs, either by means of a boat, or by a man swimming with the end of a hawser and a hook from the vessel to the reef, and hooking on to the rocks.

Should it ever become necessary to make use of these channels on either side, it will be requisite to make certain of the vessel's situation, so as to be at a moderate distance from the reefs at daylight, in order to have as much of the day as possible to run across with; and a sharp look-out must be kept for the sunken patches, some of which can only be seen in clear weather, and when the sun is in the opposite direction to the ship's course. (See conclusion of Jiddah, page 83), and even then they will not get clear through before dark, without a six-knot breeze.

The country boats, small and great, frequent these channels. In fine weather, with moderate fair winds, they steer from Jiddah direct for Romea Island, on the northern part of the Dhalac Banks on the Abyssinian side of the sea: but if the wind is southerly, they keep their wind on the larboard tack, and pass in through the channels on the African side as the wind permits, and for the nearest of which they run direct, on the appearance of bad weather.

On fresh, fair, or foul winds they use the inner channels. If going from Jiddah to Suakin, or even to Massowah, they either cross to pass into the inner channel to the south of Macowa Island, or through one of the channels

between the reefs south of it, and return in a similar manner. The boats bound to Massowah also frequently sail down the Arabian coast to near Kotumble Island; then quitting the inner channel, at daylight they proceed across the reefs passing the Simmer Islands, and when clear of the reefs they run across to make Romea Island with northerly winds, but with southerly winds they keep their luff, and cross in amongst the numerous islands on the Dhalac Banks to Massowah; from whence they return in the same way to Jiddah.

When we were running between the reefs to seaward, from Dahret Simmer Island, we saw in the forenoon a merchant boat coming in to the coast from the centre channel; and she must have made the outer parts of the reefs early in the morning. The ship and boat crossed each other with a half fathom patch of rocks between them. We had the sun at our back, which was favourable to us, but not to the boat, and there was much glare.

WINDS *and* WEATHER *in the* CENTRE CHANNEL *and including* THAT PART OF THE SEA *South of* 15° *Latitude.*

The N.E. monsoon, entering the Red Sea, becomes a S.Easterly wind, and, being repelled by the high land of Africa into a narrow strait, blows with considerable force, and rather inclining towards the Arabian coast; for it is probable they are stronger there than on the Abyssinian side, even in the lower part of the sea. These winds generally begin to decrease in force after passing the Harnish and Zoogur Islands in latitude 14°, and, as they approach the wider part of the sea, they are gradually lost in light winds along the outer reefs on the Arabian side, or turn to

the westward amongst the banks and islands on the African side, and gradually unite with the prevailing northerly winds in that part.

The southerly winds commence in October, and subside in the latter part of May or beginning of June. They blow with most force from October to the end of January, and in some months extend so far as Suez, but most commonly do not reach Jiddah; they are frequently succeeded by light variable or northerly winds in the 18th degree of latitude. From February to the end of May they do not always blow so strong as in the preceding months, and are frequently succeeded by northerly winds for several days, particularly in the month of February, at which times the native boatmen avail themselves of the opportunity to quit, and reach the southern parts of the sea.

From October to January, in the lower part of the sea, the weather is generally thick and hazy, obscuring objects until pretty near; and along the outer reefs, squalls and rain are frequently experienced in November and December. From February to May the weather is unsettled, in April and May particularly. Below the 15th degree of latitude we experienced fresh squalls from the eastward, with heavy clouds of sand, and sometimes rain.

In the beginning of June the southerly monsoon is succeeded by N.Westerly winds, which, in the lower part of the sea, seldom blow with great force. They continue pretty regular during June and July, and in August and September are frequently light and variable; in the latter month there are sometimes light southerly winds or calms. During this time the weather is frequently very thick and hazy, particularly on the Arabian side; and the Abyssinian shore is consequently much the most pleasant, and is considered the most healthy.

On the 20th of October the pilot drew our attention to the Pleiades, which the Arabs call "Tryer,"* and which was then seen low down in the east; he informed us that, on its first being seen in that quarter in the evening, it indicated the commencement of the southerly winds. The latter part of April, in the evening, the Pleiades set, when he said it would be light variable winds for forty days; after which, it will be again seen in the east in the morning, when the N.W. winds commence and continue until it again sets in the morning in the beginning of September, when there will be light variable winds for forty days, after which the southerly winds commence again, when it is seen in October early in the evening.

Winds *and* Weather *in the* Inner Channels.

In the inner channel on the Abyssinian side, northerly winds, inclining to land and sea breezes, seem the most prevalent all the year round; but most probably are, as in all other parts to the south, light and variable in August and September, when there are also frequent calms; and southerly winds are by no means common. From the month of August to October is generally fine weather, but from November to the end of March appears to be the rainy monsoon upon that coast. In April the weather was cloudy, and fine in May, June, and July; but between 19° and 20° of latitude in these months we experienced several hot winds and fresh land squalls; and, by Mr. Salt's journal, it appears that the *Panther* was driven from her anchorage, in latitude 15° 30′ at Massowah, June 20th, 1805, by a partial simoon, or sand squall.

* Thurayyá, or Tsurayyá.

There are similar winds and weather on the Arabian side; and though we had land and sea winds more frequently in March and April, the land squalls in the lower part of the sea occurred in April and May. From May to July, when we experienced them on the Nubian coast, there was at that time thick hazy weather; and heavy dews on the Arabian side opposite.

The TIDES *and* CURRENTS.

Along the shores of the Red Sea, in some places a rise and fall of the water was observed; and at a few parts of the shore, and in some of the narrowest channels, a tide was seen to flow; but at all other parts it was imperceptible.

Within the Straits of Bab-el-Mandeb, on both sides of the sea, when the ship at anchor had her head to the N.W., the tide was rising on the shore, when it appeared that the flood ran to the south; but it is to be observed, that the ship was wind rode, the tide stream not being of sufficient force to counteract the effect of the wind upon her hull and rigging; and it should also be noticed, that the abrupt turn of the coast at the entrance of the sea, causes an eddy in the neighbourhood of the straits, though not immediately within the small one, as the tide flows into the Red Sea through this narrow channel, at the same time that it is rising by the shore.

On the full and change days of the moon, it is high water at Bab-el-Mandeb at 12 h. 30 m. At Ras Macowa, on the Abyssinian coast nearly opposite to Mocha, the tide, though hardly perceptible, appeared to flow in from the open sea, and it was high water about 12 h. 20 m., and the rise about 2 feet 6 inches. At Amphilla the motion of the tide was

not perceptible, but the rise was about 3 feet, and the time of high water about 12 h. 40 m. At Ras Mejarmla, on the Arabian coast opposite, the rise was about 4 feet, and the time about 1 h. 10 m. At Camaran Island, the rise at the Equinox was 2 feet 10 inches, and the time of high water 10 h. At Dissee Island, on the Abyssinian coast opposite, a branch of tide flows perceptibly south into Goob Ducnoo; and it runs with considerable rapidity on the eastern side of Dhalac, through the contracted channel, over a rocky bottom, into Doobelloo harbour, and also into Goob-ut-Sogera on the western side of the island Dhalac, through the narrow gut that forms the entrance, where it is high water at 1 o'clock, and, by Captain Court's account, for we were not there on the springs, the rise is 9 feet, and at Dissee Island the rise is 3½ feet, and high water at 1 o'clock. At Massowah the stream of tide was hardly perceptible, but the rise was 3 feet, and high water at 1 h. 0 m. At Lobeia, on the Arabian side, nearly opposite Massowah, there was no perceptible motion of tide in the offing, but the rise was 3 feet, and high water at 1 h. 30 m. in the inner harbour. At Badour, on the Abyssinian coast, the rise of tide was 1 foot 6 inches, and high water at 1 h. 15 m. In Jiddah harbour we observed no motion of tide: there was a rise and fall of water, but so very irregular, that we were unable to obtain correct data. In January and February the greatest rise or fall on the springs was about 2 feet; but in the hot months there is less at low water by 3 feet than in the cold season.

The currents in the Red Sea seem to be entirely governed by the winds: during the prevalence of southerly breezes they run to the north, and with northerly winds to the southward. It is also probable that they increase according to the strength of either, as there was little or none at

all during the prevalence of light variable airs previous to the setting in of the south winds.

1829. In November, the current in a strong south set to the N.W., about 1 mile per hour off Jiddah harbour.

1830. In December, lat. 21° N., on the Arabian side, it set to the north 1½ mile per hour.

1831. In November, off the Outer Reefs on the Arabian side, it set along them N.N.W. 1 mile per hour.

1832. In February, there appeared to be no current in the neighbourhood of Jibbel Teer during the light winds. In August of the same year, the current in the south part of the sea set to the south 1 mile per hour.

1832. In the beginning of October, there seemed to be no current; and afterwards, on the north part of the Farsan banks, it was setting to the north about ½ of a mile per hour, amongst the banks and islands on the Outer Reefs. With exception of those already mentioned, there was an imperceptible irregular flow of tide and current through the several Deep Water Channels, but intermixed so much with eddies from the numerous islands and shallows, that it was quite impossible to ascertain it with any correctness.

Winds *and* Currents *between* Suez *and* Jiddah, *by* Captain Moresby.

The winds from Suez to Jiddah, during the whole of the year, are mostly northerly, blowing with great violence at times, but generally moderate with the changes of the moon. During the winter months, from December to April, southerly winds at times prevail for a few days, occasionally blowing fresh; more especially in the sea of Suez, where they freshen at times to a moderate gale. In

these months, in the sea of Suez, westerly gales are not unfrequent; they are called by the natives the Egyptian winds, and from their violence are much dreaded. On the Arabian coast, near Jiddah, both to the southward and northward of it, northerly, north-east, and easterly winds at times blow with great violence during the winter months, bringing off clouds of dust from the land.

Directions and set of Currents.

The currents in the Red Sea, from Jiddah to Ras Mahommed, are various all the year; no particular direction can be assigned to them; it may be generally remarked, they set with the prevailing winds, which, when strong, cause a current of sometimes twenty and forty miles a day. If the wind continues long in the same quarter, they sometimes set against it, which can be seen by the short deep swell, in a north-west wind, against which the best-sailing vessels make nothing for the first and second days, when all at once they unexpectedly get to windward. Southerly winds, which sometimes prevail from October to May, generally bring a current from twenty to thirty miles a day with them; after a north-wester has been blowing, and light winds prevail, a current generally sets to the northward, more especially on the Arabian coast; on which account the Arabian side, with the northerly winds, is the best to work on, and not the Egyptian coast, which the old navigators preferred, on account of its being more clear of shoals. On the Arabian coast a vessel will be able to take advantage of the winds, if she is near the reefs and coast, which winds almost always bear several points more from the land as the night advances, and particularly in the early part of the morning, and are well open to seaward during the day: this is not the case on the Egyptian coast, when northerly, north-north-east and north-east, and easterly winds prevail; at times, from November to March, they

cause a strong current to the westward, and as the wind becomes light, it sets back again to the eastward.

The average time a ship takes to reach Cosire from Jiddah depends so much on circumstances, that no definite period can be stated: it is seldom performed in less than ten, or longer than twenty days; in the native boats twenty-five and thirty, sometimes more. A ship ought to have good sails bent on quitting Jiddah for the northward, and if she is proceeding to Cosire, to work up on the Arabian side as far north as Namahn Island, in latitude 27° 6′ N., before she attempts to cross the sea to Cosire; for should she make to leeward of the port, it may take her days to work up a small distance.

On quitting Cosire for Suez, with a strong northerly wind, a vessel ought to stand over to the Arabian coast; she will nearly fetch Moilah, in latitude 27° 40′ N., and longitude 35° 36′ E. Having worked up thirty miles to the northward of Moilah, she may then stand over to Ras Mahommed, leaving the Arabian coast at night; as she proceeds along, the northern winds will veer to the N.N.E. out of the sea of Akabah, which enables a vessel to reach Ras Mahommed, keeping a close luff to the islands bounding the head of the sea.

Passages up and down the Red Sea.

From what has been said respecting the currents, it will be essential to ascertain the vessel's situation correctly, taking latitudes by the stars which pass the meridian, as also correcting the longitude at sunset by sights for the chronometers, of some of the numerous stars at twilight, which, from the clearness of the atmosphere in this sea, are always to be seen. After taking observations at sunset or later, a vessel ought only to stand back to the shore or reefs, half the distance she stands out, and never come nearer than ten miles off the reefs at night, in case of a

current. A vessel cannot do wrong by keeping the Arabian side on board, but not to go too close with a light wind or heavy swell, or if there is much probability of the wind failing: in case it blows hard she can take advantage of the anchorages, having a native pilot on board. These men know nothing of the Egyptian coast, which is essentially necessary should a vessel be in distress, or requiring some refit: the native pilots being acquainted with the reefs and anchorages from eye-sight, are always able to take a vessel among them with safety; a stranger, not acquainted with the localities, would feel alarmed in navigating among the reefs; they are all safe to approach, taking the precaution to be on the fore-topsail-yard with the native pilot, and keeping a good look-out for sunken rocks, the eye and not the lead being the only guide. The different shades of green on the coral rocks will show the depth of water and the spot to anchor on; when at anchor, care should be taken of a shift of wind, on the vessel forging ahead, to haul in the slack of the cable, to prevent its taking turns round the rocks, in which case it is with difficulty cleared again.

Approach to, and nature of, the anchorages.

The hire of a native pilot from Jiddah to Suez is about twenty-five or thirty German crowns, besides their food. If possible, do not take a very old man; they have little inclination to go aloft, and are generally indolent; it is necessary to keep them on the alert, and never place too great a dependance on them; they know nothing when in the middle of the sea and out of sight of land.

Memorandum of WINDS *and* CURRENTS *in the* RED SEA *throughout the Year, by* ACTING COMMANDER T. E. ROGERS, *of the Hon. Company's Brig of War "Euphrates."*

From the beginning of October to the end of April, which may be called the winter months, from the straits of Bab-el-Mandeb to Jibbel Teer, in latitude about 15° 30′ N., the wind may be said to blow constantly from the southward, with the exception of an occasional day or two of northerly winds on the full and change of the moon; but two months frequently pass without any change. The current generally takes the direction of the wind 15 or 20 miles per day, particularly with that from the northward, from the southerly winds having, as it were, heaped the waters in the upper part of the sea; from this cause also I imagine it is, that a set is at times found against the southerly winds, on the decreasing of a strong breeze from that quarter.

The effect of the southerly wind in raising the water, and the northerly wind in decreasing it, very plainly appears in Jiddah Roads; with the former a small boat can go straight from the anchorage to the shore, whereas with the latter, in the same direction, a succession of dry banks appear, having only a circuitous and shallow channel.

From Jibbel Teer, to latitude 19° or 20°, the winds at the same season are variable, blowing nearly as much from the north as the south, that particular wind predominating as you approach the north or south of the above limits. The currents here, in general, set with the wind, but at times are found to run across the sea as much as 20 miles in 24 hours; occasionally, but not often, a set to windward is experienced of 12 or 15 miles in the same time: the winds

here do not, in general, blow so strong as the prevailing ones above and below these limits.

From latitude 21° to 27°, at the same season, the northerly wind is the prevailing, but a half-moon seldom passes without having the wind one or two days from the southward, more particularly from the end of November to the beginning of March. The currents here are much the same as between Jibbel Teer and Jiddah; the southerly wind is less frequent as you approach the north extreme of these limits, strong northerly winds of two or three days' continuance are often experienced here in these months.

From latitude 27° to Suez the wind is almost constantly from the northward, and, unless during the months of December, January, and February, seldom interrupted by that from the southward. The currents run with the wind, but are not so strong as those experienced more to the southward. The north-western seldom blows with violence here for more than 12 or 15 hours at a time, and, from what I have experienced, I should say it does not blow so strong in the summer as in the winter.

In June, July, August, and September, the northerly winds prevail with more or less strength throughout the sea from Suez to Bab-el-Mandeb, with little interruption, occasional slants from the land are met with, particularly in August and September; and a vessel that sails fairly will average 35 miles a day, in working from Mocha to Suez, in these months.

Leaving Mocha in the end of July 1832, the *Euphrates* worked to Suez in 36 days. In 1836, leaving Mocha in the end of August, she completed the same voyage in 32 days. On both these occasions, from leaving Mocha until she passed the straits of Jubal, she never had a second reef in the topsails. The water was in general smooth:

the current generally against, sometimes with her, the difference giving an average of 3½ and 4 miles daily against her during the voyage.

In opposition to Horsburgh, who says the wind in the sea of Suez generally blows strongest during the day, I have found in working up on three occasions, once in June, another in July, and again in August, the contrary to be the case, never, on any occasion, having found a second reef in the topsails necessary during the day, whereas at night I have been generally obliged to double reef the topsails, and, at times, take in the main sail.

Throughout the sea of Suez, a hazy horizon is generally a sign of a breeze, but it is not always its precursor; the same remark applies to a light fleecy cloud hanging above the tops of the Tor or Sinai mountains, as seen from the southern entrance of the Straits of Jubal.

During the winter months throughout the sea the northerly wind is generally accompanied by a dry atmosphere, and the southerly wind by one that is damp. A change of wind is thus often indicated some hours before it takes place, or before any other sign is visible.

During the summer months the atmosphere is generally damp throughout the sea, but the sky overhead is so clear that a planet can often be seen at noonday.

In working up the sea to the Straits of Jubal, I think the Arabian coast is the best to keep on, and in this opinion I am strengthened by the practice of the Turkish ships, which in their way from Jiddah to Cosire, sight the island of Tirahn before they venture to cross over, so much do they dread making the Egyptian coast below Cosire. This is 60 miles further to the northward than I think a fair sailing ship need go, and the practice is sometimes attended with provoking consequences, as I have known one Turk

reach Cosire before another who left Jiddah 13 days earlier, in consequence of the former getting a southerly wind below Cosire, which to the other was a foul wind, from his being so far to the northward.

The wind in the Red Sea seldom blows in squalls, but its gradual rise is often very rapid in the northern part.

In the months of December, January, and February, a ship sometimes will carry a fair wind from Mocha to Cosire, and make the passage in 6 or 7 days. I never heard of this being done from Cosire to Mocha, unless in the summer months.

Significations of Words used in the Directions.

Shab, or Shaab (*Sha'b*)	A Reef, or Shoal.
Mirza or Merza (*Mersá*)	An Anchorage.
Shurm, Sherim, or Shrum (*Sharm*)	A Creek, or Small Cove.
Juzeerat or Jezerat (*Jazírat* or *Jazírah*)	An Island.
Waddy (*Wádi*)	A Valley, or River.
Jibbel (*Jebel*)	A Hill, or Mountain.
Ras (*Rás*)	A Cape, or Head-land.
Guttah (*Ḳit'ah*)	A patch of Rocks.
Gurn (*Ḳarn*)	A Horn, or Point.
Sale (*Seil*)	A Torrent.
Gadd (*Ḳadd*)	A Shoal.
Khor (*Khaur*)	An Inlet.
Gubbet (*Ghubbet*)	A Gulf.

NOTICE.

THE transcript subjoined in brackets to the names in the following Index, gives them as spelt according to an invariable mode of spelling first suggested by Sir William Jones, in the Preliminary Discourse to the Asiatic Researches (vol. i.), and since adopted by the Royal Asiatic and Geographical Societies.

A slight attention to the following Table will enable any person to write these names in their original character; and if he can recollect that the consonants, with two or three exceptions, have exactly the same sound as in English, and the vowels as in Italian, he will pronounce them so as to be intelligible to a Native.

VOWELS AND DIPHTHONGS.

ـَ *a*—as *a* in *bat, cat*; in India, as *u* in *but, cut*.

ا ـَ *á*—as *á* in *father, rather, lath*; sometimes, in Western Africa, as *e* in *there*.

ـِ *e*—as *e* in *bet, let*.

ي ـِ *é*—as *e* in *there, where*; or *ai* in *fair*; *ay* in *day*; *ei* in *weigh*; *ey* in *they*.

ـِ *i*—as *i* in *bit, wit*.

ي ـِ *í*—as *i* in *ravine, fatigue*; *ie* in *mien*; *ee* in *seen, between*.

ـُ *o*—as *o* in the French words *mol, poltron*.

و ـُ *ó*—as *o* in *bold, cold*; *store, sore*; *oa* in *roar, hoar*; *ou* in *soul, source*; *ow* in *bow, row*.

ُ *u*—as *u* in *full, pull, bull; oo* in *wood, wooden.*

ُو *ú*—as *u* in *lunar, lurid*; *oo* in *moon, spoon; ou* in *youth, your.*

ِيَ *aï*—as *i* in *high, stile; y* in *dry, fly; ei* in *height, sleight.*

ِيَ *eï*—as *ei* in *their, eight*; *ey* in *they, prey; ai* in *pail, paint; ay* in *pray, say; a* in *ale, pale.*

ْوَ *ou*—as *ou* in *foul, count; ow* in *owl, fowl.*

ْوَ *eu*—as *eu* in *feudal, feud; ew* in *few, mew, strew.*

CONSONANTS.

ب *b*—as in *bad.*

چ *ch*—as in *cheese, chair.*

د *d*—as in *dot, dole.*

ذ *dh, ż*—as *th* in *thee, thou, that;* as *z* by Indians, Persians, and Turks.

ض *ḍ, ḍh, ẓ*—ditto ditto, preceded by *d*, or as double *d;* as *z* by Indians, Persians, and Turks.

ظ *ḍh, ẓ*—ditto, ditto, ditto.

ف *f*—as in *feel.*

گ *g*—as in *good, girl.*

غ *gh*—as in *rain, wrist,* as pronounced in Northumberland; often as a guttural *r* by the African Arabs.

ه *h*—as in *hot, hill.*

ح *ḥ*—as in *hot;* or as *h* doubled.

ک *k*—as in *kill, kite.*

خ *kh, ch*—as in *loch;* or *gh* in *bragh;* i. e. the Welsh,

Irish, Scotch, German, and Greek *ch*; the Spanish *j*, &c.

ق ق *ḳ*—as in *kind*, but deep in the throat; and by the Moors and Egyptians, as *g* in *gold*.

ا ل *l*—as in *lamb, lore.*

م م *m*—as in *mad, man.*

ن ن *n*—as in *not, near*; as *m* before *b* or *p*.

ك *ṅ, g*—as in *ring, sing*; only used in Turkish.

پ پ *p*—as in *purse, peal.*

ر *r*—as in *rain, red.*

س س *s*—as in *sun, sweet.*

ش ش *sh*—as in *short, shade.*

ص ص *ṣ*—as in double *ss*.

ت ت *t*—as in *toad, tail.*

ث ث *th, ṡ*—as in *thick, thigh*; as *s* by Indians, Persians, and Turks; as *t* or *ts* by the common Arabs and Moors.

ط *ṭ*—as in *tt* doubled.

و *v*—as in *vast, very.*

و *w*—as in *waste, wet.*

ي ي *y*—as in *you, yellow.*

ز *z*—as in *zeal, zest.*

ژ *zh, ṡ*—as in *pleasure, measure*; the French *j*.

ع ع *'a* ع ـع *'e* ع ـع *'i* ع ـع *'o* ع ـع *'u* a peculiarly deep guttural catch or stoppage in the throat, which may be expressed by a short pause.

No Arab word can begin with two consonants; thus they say *Iskander* for *Skander*, from Alexander.

No two vowels can follow each other immediately; thus *ăfiyeh*, instead of *ăfich*.

The double consonant is expressed by a mark (¯) above the letter.

The *a* of the article *al* is cut off after a vowel, and its *l* takes the sound of *d*, *dh*, *ḍ*, *ḍh*, *ḍh*, *r*, *s*, *sh*, *ṣ*, *t*, *th*, *ṭ*, *l*, *n*, *z*, when it immediately precedes those letters, thus: *'Abdu-r-raḥmán*, *Shujáu-d-daulah*, *Khairu-d-dín*, *Zeïnu-n-nisá*, *Manṭiḳu-ṭ-ṭaïr*, for *'Abdu-l-raḥmán*, &c.

The *emphasis* or *stress* is laid on the long vowel by the Arabs, but on the last syllable by the Persians and Turks. In compound names and titles, such as *Ḳáyim-maḳám*, *Yeñicherí-Aghá*, *Khazínahdár-Odah-Báshí*—the Turks lay the greatest stress on the last syllable of the first word, thus: *Odáh-Bashí*, *Mahmúd-Aghá*.

The final *b*, *d*, and *j*, are sounded *p*, *t*, and *ch*, by the Khazináhdár Turks.

INDEX.

Abban Sherm Anchorage, 102 (*'Abbán Sherm*)
Abbeat ul Shab, 92 (*Abyad al Sha'b*)
Abbelat Jibbel, 126 (*'Abelát* or *'Abáyil Jebel*)
Abbiat Ras, 92, 94 (*Rás el Abyad*)
Abbooderage Ras and Bay, 123 (*Abú Deraj*)
Abboodoodah, 73, 84 (*Abú Dúdah*)
Abboo Harreet Reef, 80 (*Abú Haríth*)
Abboo Hummummah, 182, 283 (*Abú Ḥamámah*)
Abbool Gullour Reef, 69 (*Abú Ḳulúr*)
Abboolhodere Patch, 77 (*Abú-l Ḥodeïr*)
Abboolyahood Patch, 77 (*Abú-l Yahúd*)
Abboo Mutnah Ras, 86 (*Abú Matnah*)
Abboo Murina, 169 (*Abú Marinah*)
Abbooloo Jibbel, 9 (*Abú Lúlú Jebel*)
Abbooshoke Anchorage, 72, 73 (*Abú Shauk*)
———— Jibbel, 73
———— Reefs, 84
Aboo Dahrah Island, 69 (*Abú Ḍahrah*)
Aboo Eyle Islands, 14 (*'Abú 'Aïl*)
Aboo Farhramish Reef, 89 (*Abú Farámish*)
Aboohadger Ras, 195 (*Abú Ḥajar*)
Aboo Humroon, 83 (*Abú Ḥamrún*)
Aboo Kalbe Ras, 53, 86 (*Abú Kalb*)
Aboo Lelf Island, 51, 86 (*Abú-l Maḥlef*)
Aboolaad Island, 65 (*'Abulát*)

Aboo Looker Shab, 29 (*Abú-l lukà Sha'b*)
Aboo Mungarah Island, 199 (*Abú Minḳárah*)
Aboo Murdafer Reef, 89 (*Abú Madáfi'*)
Aboo Mutarah, 98 (*Abú Maṭárih*)
Aboo Mutnah Ras, 53 (*Abú Matnah*)
Aboo Nuckla Patch, 77 (*Abú Nukhlah*)
Aboo Rubah Island, 148, 156 (*Abú Rab'ah*)
Aboo Rumlar, 203 (*Abú Ramlah*)
Aboo-sabah Core, 28 (*Abú-s-saba' Khaur*)
Aboo Sahain, 91 (*Abú Saḥim*)
Aboo Sayel Reef, 69 (*Abú Sayyál*)
Aboo Shad, 31 (*Abú Shadd*)
Aboo Shedger Island, 31 (*Abú Shejer*)
Aboo Shoogar Island, 37 (*Abú Shuḳar*)
Aboo Shoory Island, 40 (*Abú Shúrí*)
Aboosomer Ras Islets and Anchorage, 199 (*Abú Súmi*)
Aboo Sherryer Island, 146 (*Abú Sheráyir*)
Aboo Tamalah Island, 200 (*Abú Tamalah*)
Aboo Yahbis, 158 (*Abú Yábis*)
Adaga Point and Sand, 123, 124 (*'Atáḳah*)
Addar Eyle or Sugar Loaf, 11 (*Ad-dár 'Aïl*)
Addar Jibbel or Saddle Hill, 76, 77 (*Ad-dár Jebel*)
Adjuah Island, 29 (*'Ajúsah*)
Adjuce Island, 131, 132 (*'Ajúz*)
Aga Island, 64, 65 (*Aghá* or *Ṭaharah*)
Aggeeg Kebeer or Badour Island, 160 (*'Aḳík Kebír* or *Bahdúr*)
Aggrab Islands and Reef, 168, 169 (*'Aḳrab*)
Agrib Mount, 116, 119, 122 (*'Aḳrab*)
Agrab Island, 141 (*'Aḳrab*)
Atah Mersa, 172 (*'Aṭá Mersá*)
Ahwhendear Island, 104 (*'Uweïndíyah*)
Akabah Gulf, Sea, and Village, 107, 118, 204 (*'Aḳabah*)

Alli Shab, 68, 140 (*'Alí Sha'b*)
Ally Shab, 110, 111, 112, 115, 117 (*'Alí Sha'b*)
Amar Shab, 71 (*'Amár Sha'b*)
Amarat Islands, 162 (*'Amárát*)
Amare, 73 (*'Omeïr*)
Amber Sale Island, 145, 149 (*'Anber Seïl*)
Amna Island, 36 (*Āminah*)
Amphilla Ras and Village, 129, 130 (*Hanfelah*)
——— Anchorage Good, 111, 112, 113, 115, 117.
Antar Sherm, 104 (*'Antar*)
Arabah Wáddy, 204 (*'Arabah Wádí*)
Arafar Ras, 18 (*Ḥárifah*)
Argeego or Dohono Bay, 135 (*Harḳíḳó* or *Dokhnan*)
Arrakea Mersa, 175, 185 (*Ar-rákíyah Mersa'*)
Arroors Mersa, 175 (*'Arús Mersá*)
Assabar Shab, 71 (*As-saba' Sha'b*)
Assab Bay, 6, 7, 9 (*'Asab*)
Ashig Island, 31, 36 (*'Ashiḳ*)
Ashig Island Reef, 86 (*'Ashiḳ*)
Assease Ras, 161 (*'Asís Rás*)
Assore Island, 51 (*Ḥaṣr*)
Assub Shab, 71 (*As-sabb Sha'b*)
Assugga Shab, 70, 71 (*As-saḳḳah Sha'b*)
Attiah Ras, 93 (*'Aṭiyah Rás*)
Azood Trelor Hill, 173 (*Az-zuhdaṭ Riḥleh*)

Baace Island, 30, 32 (*Baäs*)
Báb-el-mandeb Cape and Anchorage, 1, 2
——— Straits, 1, 2
Badcera Sale Island, 146, 156 (*Badírah Seïl*)
Badour Island, or Aggeeg Kebeer, 159, (*Bahdúr*)
——— Village, 160
Bahair and Reef, 73, 84 (*Boḥeïrah*)

Barcoot Island, 171 (*Barakút*)
——— Bank of Rocks and Sand, 20
——— Shab, 171 (*Sha'b*)
Bareedy Cape, 96, 97 (*Barídí*)
Barmosa Seggeer Island, 170 (*Barr Músa' Ṣeghír*)
——— Kebeer Island, 171 (—— —— *Kebír*)
Barrat Dodom, 162 (*Barrat Dódam*)
Barn Hill, 9
——— or Jibbel Sedour, 123, 129, 131 (*Jebel Ṣudúr*)
Barn Rock, 127
Baryer Shab, 181 (*Baráya' Sha'b*)
——— Basin Hill, 127
Bayath Ras, 18 (*Rás el Bayádh*)
Bayath el Ras, 85 (———————)
Beach Hill, 130, 131
——— Hummock, 9
Beacon Rock, 111
Beahree Reef, 80 (*Biyárí*)
Beer ul Marshy Anchorage, 203 (*Bír-al-Máshiyah*)
Benass Rás and Bay, 191, 192 (*Benás*)
Beree Islands, 30, 33, 35 (*Berrí*)
Berenice Mountain, 192
——— Ruins of, 192
Berry Reef, 80 (*Berrí*)
Bettah Island, 142
Billhaha Island, 139 (*Bilḥah*)
Billool Bay and Ras, 7, 125 (*Beïlúl*)
Bolhessoo Island, 149 (*Bú-l-ḥiṣṣah*)
Bojamar, 53 (*Bú-jama'*)
Black Hillock, 110, 111
—— Rocks, 11
Booby Hill, 9
Bowarred Island, 22, 29 (*Bawárid*)

Brassy Bay, 158 (*Bireïsí*)
Braickhah Sherm, 93 (*Bureïkah Sherm*)
Breakers, 25, 26
Broad Channel, 101
Brothers' Islands, 5, 197
Burkat Island, 163 (*Barakát*)
Buckarrah Core, 38, 39, 43 (*Bakárah Khaur*)
Bucker Island, 132 (*Bak'ah*)
Buggarah Jibbel, 49, 50 (*Baḳarah Jebel*)
Bunjam Shab, 22 (*Badinján Sha'b*)
Buradoo Island, 146 (*Baráduh*)
Burdess Ras, 121 (*Bardeïs*)
Burmal Hadjee Islands, 130 (*Barm al Ḥájí*)
Burrahghan Island, 107 (*Baraḳán*)
Button Rock, 127
——— or Cape Island, 45

Cadamon Kebeer Island, 21 (*Kadamán Kebír*)
——— Seggeer Island, 21 (——— *Ṣeghír*)
Caïro from Toor, 118 (*Túr*)
Carmaran Island and Bay, 18, 19 (*Kamarán*)
——— Reef, 85
Cape Island or Button Rock, 45
—— Reef, 191
Cap Hill, 9
Casar Ras, 158 (*Kaṣár*)
Catherine's (St.) Mount, 118
Centre Peak Island, 25
——— Cluster of Reefs, 79
Centurion Shoal, 205
Channel near Fársán Kebír, 39
Chimney Hill or Mallago, 177
——— Peak, 9

Clive or Seaoul Islands, 110, 114 (*Siyáwul*)
Cluster of Rocks, 35
Coast of Nubia, 172
Cobane Reef, 85 (*Kobbeïn*)
Cocha Village, Good Water, 15 (*Khauhh*
Cockloft Island, 151, 152
Comsah Ras, 92 (*Khamsah, Rás el*)
——— Shab, 92 (*Khamsah, Sha'b el*)
Connected Island, 25
Coobach, 137 (*Ḳubá'*)
Coolam Island, 40 (*Kulám*)
Coomfidah Town, 54, 87 (*Ḳunfidah*)
Cootab Shab, 171 (*Ḳuṭb Sha'b*)
Cootoof el Mussaree, 49 (*Kutúf el Miṣrí*)
Cosire, Directions for, 192, 195, 196, 197 (*Koṣaïr*)
Cuffeel Islands, 59, 61, 87 (*Kefíl*)
Cumbeeber Village, 150 (*Kunbeïbah*)
——— Anchorage, 154
Cussar Ras, 129 (*Ḳaṣar*)
——— Village, 50 (*Khis'ah*)

Dædalus Shoal, 205
Dahaleah Core, 136 (*Dákhilíyah Khaur*)
Dahab Mersa, 202 (*Dhahab Mersá*)
Dabhan, 51 (*Dahbán*)
Dahlimar Rás, 88 (*Dhá-l-lam'ah Rás*)
Dahnac Island, 71 (*Dánaḳ*)
Dahrat Abeed Island, 168 (*Ḍahreṭ 'Abíd*)
Dahrat Aboo Masaláh Island, 68 (*Abú Maṣálíḥ*)
Dahrat Duggelet Island and Reef, 168 (*Ḍahraṭ ed-dákhilaṭ*)
Dahrat Meray Island, 67, 68 (*Meráyeh*)
Dahret Island, 146, 147, 155 (*Ḍahreṭ*)

Dahret Dúbanát Island, 147 (*Dahret Dhúbanát*)
Dahret Dulkoss Island, 151 (*Dhú-l-kós*)
Dahret Entoedool Island, 142 (*Enta'yidol*)
Dahret Goobarree Island, 153 (*Ḳubárí*)
Dahret Jaffree, 31, 36, 86 (*Ja'ferí*)
Dahret Mutterhane Island, 43 (*Maṭraḥeïn*)
Dahret Simer Island, 35 (*Simer*)
Dahret Segarla Island, 138, 140 (*Sèghálah*)
Dahret Simmer Island, 67 (*Simer*)
Dallathúm Island, 148 (*Dhá-l'adham*)
Dalbahout Island, 147 (*Dhá-l-bahút*)
Damart Shab, 172, 184 (*Damáth Sha'b*)
Dangerous Reef, 116
——— Shoal, 19
——— Reefs and Patches, 112
——— Rocks, 194
Dangers W. of Hassanee Island, 100
Darah Teras Islands, 169 (*Dar'ah Terás*)
Darghelee Island, 155 (*Dár Ghullah*)
Date Grove, 119
Darmabah, 6
Debah Mirza, 195 (*Dhibá' Mersa*)
Deep Water Channel, 23
Deesan Jibbel, 39 (*Dísán*)
Degaze *v.* Guttah
Delaidelah Ras, 92 (*Duleïdelah*)
Delgabe Island and Reef, 168 (*Dhá-l'ghább*)
Demerah Sherm, 104, 105 (*Dumeïghah Sherm*)
Dènafaree Island, 140 (*Dhá-n-nafáríḳ*)
Deneb Merza, 90 (*Dheneb, Mersá*)
Derboshat Village, 150 (*Durbushát*)
Dergoez, 83 (*Derḳo'*)
Derruhkah Island and Reef, 168 (*Derrúkah*)

Derome Island, 139 (*Derôm*)
Derridgeree Island, 148, 155 (*Dhá-rijrij*)
Dhalac Bank, 138 (*Dahalak*)
——— Reef, 140
——— Island, 140
——— Kebeer Village and Anchorage, 150, 153
——— S. W. Anchorage, 150
Diffnane Island, 157 (*Difneïn*)
Dilladeah Island, 142 (*Dhí-l'adhíyah*)
Dillathum Island, 147, 154 (*Dhí-l'a ḥam*)
Dissee, or Valentia Island, 133, 135 (*Diseï*)
——— Peak and Anchorage, 133
——— Sand-bank and Shoal, 134
Dithahaver Island, 48 (*Dhî Ḍhaháyah*)
Doduffer Island, 34 (*Dhú Dafr*)
Dogar Anchorage, 60 (*Daukah*)
Doger Jibbel, 64 (*Daukah Jebel*)
Doharah Island, 71 (*Ḍohrah*)
Dohono, or Argeego Bay, 135 (*Ḍokhnau, Harkíkó*)
Dohul Island, 146, 147, 155 (*Ḍohul*)
Doharab Island, 47 (*Ḍohr-áb*)
Dohana Bay, &c. 179, 180 (*Dokhánah*)
Dokhan Jibbel, 27 (*Dokhán Jebel*)
Doobelloo Village, &c. 140, 141, 150, 151 (*Dhú Belluh*)
Doomairah Island and Jibbel, 5, 8, 9 (*Dumeïrah; Jebel*)
——— Sintuar Ras, 5, 6 (*Sintiyár*)
Doomsook Island, 46, 47, 48 (*Dumsúk*)
Doorah Rás, 194 (*Dhurrah Rás*)
Doraker Island, 37 (*Dhú Rají*)
Dorama Island, 29 (*Doramá*)
Dorish Island, 69 (*Dórish*)
Doshaggea Island, 70 (*Doshákíyah*)
Double Peak Island, 10, 11

Double Peak, 129
Dowassela Island, 47, 48 (*Towáṣelah*)
Dubara Island, 58 (*Dubáreh*)
Duberdabb Anchorage, 177 (*Dabadíbah*)
Dubher Sherm, 202 (*Dhaba' Sherm*)
Duhulum, 142 (*Dhú-l'alam*)
Dulangebart Island, 141 (*Dhú-l-aṅkibát*)
Dulbahout Island, 147, 155 (*Dhú-l Bahút*)
Duldeah Island, 139 (*Dhú-l-bí'ah*)
Dulfeedo Island, 140, 143 (*Dhú-l-fídol*)
Dulgold Island, 139 (*Dhú-l 'aḳal*)
Dulgoof Island, 139 (*Dhú-l ḳuff*)
Dulgrose Island, 149 (*Dhú-l Ḳurúsh*)
Dulhalum Island, 141 (*Dhú-l'alam*)
Dulkoos Island, 147 (*Dhú-l kuss*)
Dulkoss, or Sayeen Island, 140 (*Dhú-l koss*, or *Sáyín*)
Dullow Core, 182 (*Dhú-l lawá Khaur*)
——— Shab, 183 (——— *Sha'b*)
Durakah el Bah Island, 149 (*Darrákah el barr*)
Durakah el Bahar, 149 (——— *el baḥr*)
Durafroos Island, 142 *Durafrús*, or *Durasrúm*)
Durghaum Island, 155 (*Dhú-Raḳahám*)
Durgoman Kebeer Island, 142 (*Dergomán*, or *Terjumán, Kebír*)
Durgonian Seggeer Island, 142 (—— *Seghír*)
Duroor Mersá, 174, 184 (*Durúr Mersa'*)
Durramsus Island and Anchorage, 129 (*Darámsus*)
Dthabuck Island, 41, 42 (*Ḍhábik*)
Dyer Island, 30 (*Ḍaháyir*, or *Ḍhaháyir*)

Ebrahim Mersa, 137, 156 (*Ibráhím Mersa*)
Eddom Sheikh Island and Reef, 168 (*Ed dóm esh Sheïkh*)
Edd Village, 128 (*'Eïd*)

El Aboo Looker Shab, 48, 49 (*Abú-l luhá Sha'b*)
El Askar Ras, 61, 62, 65 (*El 'Askar Rás*)
Elba Cape and Mountain, 188 (*'Erbah*, or *'Elbah*)
—— Island and Reefs, 189
El Bother Island, 20 (*El-Boḍhi'*)
El Bother Rock, 32 (*El Bothr*)
El Burk Core, Good Anchorage, 51 (*El Birk*)
El Elhallah Island, 69 (*El Ḥálah*)
El Etwid Core and Village, 49 (*El Etwid Khaur*)
El Girb Shab, 71 (*El Gharb Sha'b*)
El Hummar Ras, 60 (*El Ḥumár*)
Eliza Reef, Northern, 89, 91
Eliza Shoals, 88
El Jebbarah Shab, 71 (*El Jebbárah Sha'b*)
El Jeffine Shab, 72 (*El Jeffín* ——).
El Kebeer Shab, 29, 48, 88 (*El Kebír* ——)
El Jurmah Shab, 66 (*El Jum'ah* ——)
El Mahathun Shab, 71 (*El Maḥḍhún* ——)
El Majis Village, 49 (*El Ma'jiz*)
El Muckerah Core, 49 (*El Makrah Khaur*)
El Multhar Shab, 71 (*El Muḍhárr Sha'b*)
El Onserat Island, 33, 34 (*El 'Onṣurát*)
Eloom Island, 69 (*El Umm*)
Elphinstone Reef, 195
El Wussim Roadsteads, 50 (*El Wasm*)
Emerald, or Macour Island, 191 (*Mukawwar*)
Entabeel Mersa, 163 (*Enta'bíl Mersa*)
Entadell Island, 147 (*Enta'idel*)
Enteurah Island, 150, 152 (*Ente'arah*)
Entogaduf Island, 147 (*Ento'ghodof*)
Entookfash Island, 22, 29 (*Entu'fásh*)
Eree Island, 158 (*Er-riḥ*)
Ernege, 86 (*'Umeḳ*)

Ernege Core, 52 (*'Umeḳ Khaur*)
Erthane Island, 33 (*Erḍheïn*)
Erwa Island, 141 (*Erwá*)
Essah Rás and Bay, 18 (*'Isa' Rás*)
Essah Abbe Island, 168 (*'Isa' Abí*)
Etwid Jibbel, 49 (*Etwid Jebel*)
Etwid Island, and other Reefs, 167

Fair or Gaysoom Island, 110, 115 (*Ḳeïsúm*)
False Chimney Hill, 176
Farrar Islands, 59, 87 (*Fará*)
Farsan Islands, 38 (*Fárisán*)
Farsan Kebeer, 39 (*Fárisán Kebír*)
Farsan Seggeer, 33, 84 *Fárisán Seghír*)
Farsan Shab, 66 (*Fárisán Sha'b*)
Farsan Village, 47 (——)
Fedger Mersa, 174 (*Fejer Mersa*)
Fedjerah Mersa, 15 (*Fejerah*)
Fellaha Shoals, 79 (*Felláḥah*)
Feráfer Island, 28 (*Feráfer*)
Ferandeer Islands, 58 (*Firandíyah*)
Fifth Outlet, 186
First Cluster, 184
First Outlet, 184
First Peak, 74
First and Small Peaks, 9
Fisherman's Islands, 117
Foul Bay, or Shab Aboofenderah, 188
Four Small Shoals, 98
Fourth Outlet, 186
Fresh Water Spring, 16, 151
Funnel Hill, 178
Furragene Ras and Island, 159, 160 (*Farájín Rás*)

Furtuḳ Ras and Anchorage, 201 (*Fartak Rás*)
Fury Shoal, 192
Fusht Island, 32 (*Fasht*)

Gad Alli, 167 (*Ḳadd 'Alí*)
Gad Amaze Reefs, 84 (*Ḳadd Homeïṣ*)
Gad Darah, 167 (*Ḳadd Dar'ah*)
Gad Etwid Reefs, 167 (*Ḳadd Etwid*)
Gad Entagaduf Sand-bank, 147 (*Ḳadd Ento'ghodof*)
Gad Haderah Island, 57 (*Ḳadd Ḥaḍarah*)
Gad Mallap, or Hummum Ras, 121, 122 (*Ḳadd Maḥlab, Ḥamám Rás*)
Gad ul Marakab, 124 (*Ḳadd al Maráhib*)
Gahaise Ras, 73, 75, 79, 88 (*Ḳoḥeïz Rás*)
Garna Duff, 157 (*Ḳarn 'Adaf*)
Gaysoom, or Fair Island, 110, 115, 116 (*Ḳeïsúm*)
Gebarah Island, 69 (*Jebárah*)
Geeass, 49 (*Ḳiyás*)
Geedan Anchorage, 73 (*Ḳidán*)
Geedan Coast, 134, 136 (——)
Geedan Peak, 137 (——)
Geehye Mersa, 174, 184 (*Ḳiháï Mersa*)
Genab Shab, 71 (*Jenáb Sha'b*)
Geserat Askar Island, 142 (*Jezírat Aṣghar*)
Ghaham Reef, 78 (*Ḳaḥam*)
Geesan Town and Anchorage, 27, 28, 86 (*Gízán*, for *Jízán*)
Ghurkoomah Ras, 101 (*Kurkumah Rás*)
Gibel Jing Island, 32 (*Jebb-el-jinḳ*)
Gillargin Anchorage, 61, 63, 87 (*Jelájil*)
Gomarree Island, 39 (*Ḳomárí*)
Gooban Island, 22 (*Ḳubbán*)
Goobanee Village and Anchorage, 150, 154 (*Ḳubbání*)
Goob Ducno, or Ansley Bay, 133, 134, 135 (*Ghubb Dokhn*)

Goob el Hamar, 15 (*Ḳubbaṭ el Himár*)
Goobut el Hamar, 15 (*Ḳubbaṭ el Himár*, or *Khaïmah*)
Goob ut Sogera, 151, 154 (*Ḳubbaṭ Ṣoghra*)
Good Water, 13, 15, 17, 45, 51, 54, 164
Goofs, 73, 84 (*Ḳuff*)
Goomah Bay, 39 (*Ḳumḥ*)
Goomah Core and Island, 46, 47 (*Ḳumḥ Khaur*)
Goomud Rhabat Hill, 175 (*Ḳumad Rabáṭ*)
Goosee Island, 22 (*Ḳúsí*)
Goosum Jibbel, 154 (*Ḳusum Jebel*)
Gorab Island and Bank, 31, 37, 38, 42 (*Ghoráb*)
Gose Abool Ire Mountain, 54, 64 (*Ḳauz Aḅú-l"Ayir*)
Gouay Village and Anchorage, 197 (*Ḳuweïḥ*)
Goulafugger Core, 16 (*Ghuleïfaḳah*)
Great Harnish Island, 10, 11 (*Ḥánish*)
Great Jehan Peak, 120, 121 (*Jihán*)
Grushe Shab, 97 (*Ḳurúsh Sha'b*)
Gubbehoo Island, 143 (*Ghabbíhú*)
Gubroo Sheikh, 158 (*Ḳabru-sh-sheïkh*)
Gulf of 'Aḳabah, 107
Gulf of Suez, Pilot's Good, 120
Gumarah Island, 113, 114 (*Ḳamrá*)
Gundabelee Island, 153 (*Ḳundábílú*)
Gundalite Island, 157 (*Ḳandelláï*)
Guprear Reef, 95 (*Ḳabríyah*)
Gurb Abbe Essah Island, 168 (*Gharb Abí "Isa'*)
Gurb Miune and Reef, 168 (*Gharb Miyún*)
Gurb Islands, 169 (*Ḳarb*)
Gurnah Shurnah, 27 (*Ḳarn-esh-Shurrah*)
Gurnah Watah, 28 (*Ḳarn-el-Wad'ah*)
Gurram Mussarmroo Island, 170 (*Ḳáram Masámerhu*)
Gurreeb Island, 139 (*Gharíb*)
Gutheir Island, 32, 36 (*Ḳadheyyah*)

Gutherban Island, 31 (*Esh-sha'bán*)
Guttah Degaize Reefs, 88 (*Ḳaṭ'ah Dukeïs*)
Guttah Geedan Reef, 84 (*Ḳaṭ'ah Ḳídán*)
Guttah el Goofs Reef, 84 (*Ḳaṭ'ah el Ḳuff*)
Guttah el Rugguan, Reef, 84 (*Ḳaṭ'ah el Raghwán*)
Guttah el Shaybah Reef, 84 (*Ḳaṭ'ah el Sho'aïbah*)
Guttah Tuttefah Reef, 85 (*Ḳaṭ'aṭ et-teffáḥ*)
Guttah ul Khurrar Reefs, 92, 93 (*Ḳaṭ'aṭ el Kharrár*)
Guttal el Bunna, 186 (*Ḳaṭ'aṭ el Banná*)
Guttal Coozermere, 83 (*Ḳaṭ'aṭ Ḳuzámíyah*)
Guttal Kennarshar Reef, 163 (*Ḳaṭ' aṭ Ḳennáshah*)
Guttal Omul Hallala, 83 (*Ḳaṭ'aṭ Omm-al Ḥallálah*)
Guttal Tromba, 163 (*Ḳaṭ'aṭ Ṭoronbah*)

Hadarah Bank and Islands, 57 (*Ḥadarah*)
Hadbaro Kebeer Island, 147 (*Adhbárah Kebír*)
Hadbaro Seggeer Island, 147 (*Adbárah Seghír*)
Haddally Jibbel, 8 (*Ḥadd'álí Jebel*)
Hadjarah Islands, 160 (*Ḥajar*)
Haddar Owwee Hill, 173 (*Ḥadaráwí*)
Hadoo Mersa, 163 (*Ḥaddhu Mersṭ'*)
Haffer Island, 40 (*Háfer*)
Halli Jibbel, 53, 54 (*Hálí*)
Halli Point, 52, 53, 86 (*Hálí*)
Hammar Island, 29 (*Ḥamár*)
Haramil Island, 90, 91 (*Ḥarámil*)
Harbee, 9 (*Ḥarbí*)
Harmeel Sale and Island, 144 (*Ḥarmíl Seïl*)
Harneesh Island, 48 (*Hánish*)
Harnish Sule Islands, 10 (*Hánish Suyúl*)
Harrat Island and Reef, 148, 155, 156 (*Hárat*)
Hartebah Ras, 88, 93 (*Hátibah*)
Hassanec Island, 97, 99 (*Ḥasání*)

Hassieff Core, 38, 41 (*Ḥasáyif Khaur*)
Hawroof Island, 31 (*'Uwwáf*)
Haycock Hill, 9, 127
Haycock Island, 10, 11, 25
Haycock Island Channel, 11
Haycock Peak, 183
Helaib Mersa, 189 (*Ḥaláïb Mersa*)
Heyga Island, 90 (*'Aïḳah*)
Highest Peak, 12
High Island, 13, 14
High Saddle, 9
Hindeah Island, 40 (*Hindíyah*)
Hinde Gedam Island, 171 (*Hind Ḳadám*)
Hodeidah Town, 17 (*Ḥodeïdah*)
Hooseniel Marjis Jibbel, 49 (*Ḥusná-l Májis Jebel*)
Hootaimy Race, 103 (*Ḥuṭeïmí*)
Howakel Bay, Island, and East Channel, 131 (*Howákil*)
——— N.W. Channel, 132
Howalee Huttoob Island, 148 (*'Awálí Ḥuṭúb*)
——— Lhoorah Island, 148 (*'Awálí Shaurah*)
Howate Island, 149 (*Ḥoweït*)
Howateb Island, 139 (*Ḥawáṭib*)
——— Kebeer Island, 139 (*Kebír*)
Hukally Island, 145 (*Ḥukáleh*)
Hummum Bluff, 118, 121, 122 (*Ḥamám*)
Hummum ul Faroun, 122 (*Ḥamám Fir'aun*)
Humreek Island, 21, 85 (*Urmuh*, or *El murh*)
Humroo Ras, 195 (*Ḥamrhu Rás*)
Hurtow, 132, 133, 134 (*Ḥartau*)
Hurteetao Island, 138 (*Ḥatítau*)
Hurub Ras, 137 (*Ḥarb Rás*)
Hussay Sherm, 99 (*Hasseyy 'Sherm*)
Jaffatine Islands, 199, 200 (*Jifátín*)

Jaffree Islands, 32, 36 (*Ja'ferí*)
Jafofe, 52 (*Jahfúf*)
Jebbarah Island, 71 (*Jebbárah*)
Jeddere Island, 71 (*El Jedír*)
Jeddere Ras, 17 (*Rás el Jedír*)
Jehan Peak, 120 (*Jiheïn*)
Jennarbet Island, 61, 62, 65 (*Jinnábiyaṭ*)
Jennerbet Island, 87 (———)
Jermalko Island, 139 (*Yermálkau*)
Jerome Island, 146, 148 (*Jeróm*)
Jeseeral Mogid Island, 52, 56, 57, 67, 86 (*Jezíraṭ Marḳah*)
Jeserat Darmabah Island, 6 (*Jezíraṭ Darmabah*)
——— Dilcose Island, 6 (——— *Dhí-l ḳaus*)
——— Fartmar Island, 6, 7 (——— *Fáṭimah*)
——— Shetevo Island, 160 (——— *Shaṭírah*)
Jeseerat Abdullah, 165, 184 (——— *'Abd-allah*)
——— ——— Anchorage, 173
——— Coordarlee, 127, 128 (——— *Kudd 'Alí*)
——— Coordomeat, 128 (——— *Kurdúmiyaṭ*)
——— Deesan Island, 43, 44 (——— *Dísán*)
——— Gooban Island, 159 (——— *Ḳubbán*)
——— Gootna Island, 57, 58 (——— *Ḳuṭnaḥ*)
——— Hackbane Island, 42 (——— *'Aḳbeïn*)
——— Hubber Island, 37 (——— *Ḥibár*)
——— Kishran, 72 (——— *Kishrán*)
Jibbel Cassar, 38 (*Jebel Ḳaṣr*)
Jibber Sherm, 106 (*Jibah Sherm*)
Jiddah Town, Harbour, &c., 74, 75, 81
Imumuck Table Land, 155 (*Imamak*)
Indesillee Island, 144 (*Ente'ṣileh*)
Indubbee Island, 153, 154 (*Enta'bir*)
Inteusnoo Island, 144 (*Enta'asnú*)
Istye Ras, 159 (*Istáhí Rás*, or *Es-sáj*)

John's, St., Reef, 191
John's, St., or Seberget Island, 190 (*Zeberjed*)
Joubah Island, 105, 107 (*Yúba'*)
Jubal Island, 110, 111, 112, 113, 116 (*Jubal*, or *Jublah*)
Jubal Peak, 112, 117 (——)
Jubal Straits, 109, 114, 115, 116 (——)
Jurab Island, 30 (*Jurâb*)
Jurmtudda Island, 146 (*Jarmaṭ-ad-dá*)
Juzerat Faroun, or Pharoah's Island, 203, 204 (*Jazíraṭ Far'aun*)
Juzreeal Ras, 189 (*Jazr'iyál Rás*)

Kaddo Island, Islet, and Bank, 148, 156 (*Kadd-hu*)
Kebeer ul Shab, 29, 88, 89 (*Sha'b el Kebír*)
Kedf Muckyesh, 16 (*Ketf el Makháyish*)
Kedf Ocraish Bluff, 16 (*Ketf Ḳoreïsh*)
Keftib Village, 44 (*Kethíb*)
Keteeb Ras, 17 (*Rás Kethíb*)
Kheehum ul Ras, 92 (*Khiyam, Rás el*)
Khoormah ul Ras, 90, 91 (*Khurmá, Rás el*)
Khoswan Shab, 120, 121 (*Khoṣwán Sha'b*)
Kharrar ul Sherm, 92 (*Kharrár, Sherm el*)
Khynah Island, 43 (*Khaïmah*)
Kishran Anchorage, 72, 84 (*Kisḥrán*)
Korah Bobah Ras, 199, 200 (*Khaur Abábah Rás*)
Kotama Island and Reef, 22, 27, 31 (*Kotámah*)
Kotumble Island, 50, 55 (*Kotunbul*)
Kushah Jibbel, 24 (*Jebel Kush'ah*)

Laboo Island, 155 (*Labuwah*)
Lagoon, 121
Larmoose Island, 132 (*Lámús*, for *Umm-en-námús*)
Leet Town and Anchorage, 64 (*Lith*)

Legakinde Mersa, 163 (*Liḳák Hindí*)
Libnah Island, 100
Little Makafal, 178 (*Muḳaffal*)
Little Salaka, 177 (*Saláka'*)
Loban Island, 31 (*Lobán*)
Locha Island, 170 (*Lokhak*)
Loheia Town, &c., 18, 23, 29, 85 (*Loḥeyyah*)
Loomar Ras, 25 (*Lúmàh*)
Low Island, 25
Low Rocks, 127

Macawa Ras, 6 (*Makawwa Rás*)
Macour, or Emerald Island, 191 (*Mukawwar*)
Macowa Island, 175, 179 (*Makawwa*)
Madges Ras, 93, 95 (*Ma'jiz Rás*)
Makafal Core, 178, 180 (*Muḳaffal Khaur*)
Maluck Ras, 89, 90, 91 (*Ma'laḳ Rás*)
Mahama Island, 48 (*Mahámah*)
Mah-heb-bakah Islands, 9 (*Moḥabbakah*)
Maharsene Jibbel, 18 (*Maḥásin Jebel*)
Mahasin Ras, 60 (——)
Mahmood Shab, 79, 110, 111, 112 (*Maḥmúd Sha'b*)
Mahommed Ras, 109, 110, 111, 119 (*Moḥammed Rás*)
Mahar Ras, 98 (*Maḥár Rás*)
Mahoon Island, 143 (*Mahún*)
Mallago, or Chimney Hill, 177
Marabah Jibbel, 49 (*Marábah Jebel*)
Marabah Island, 39, 40 (——)
Maran Island, 35 (*Márán*)
Marass Shab, 68, 70 (*Marás Sha'b*)
Marram, 72 (*Maḥram*)
Marruecah Rocky Bank, 77, 78 (*Maruwíyah*)
Marsub Jibbel, or Small Saddle, 9 (*Ma'sab Jebel*)

Marrar-but-el Khyle Shoals, 70 (*Murábïṭ el Khaïl*)
Mashilgar Island, 149 (*Mashílaghah*)
Massowah Island, Town, and Harbour, 135, 136, 155 (*Muṣawwa'*)
Meeting of the Winds, 109
Mehabeese, or South Island, 193 (*Meḥabís*)
Mejarmla Rás, 16 (*Mujámelah*)
Memlah Village, 150 (*Memlaḥah*)
Mercasser, 53 (*Makásir*)
Merkat Anchorage, 72 (*Mirkát*)
Messalle Rás, 124 (*Misellah*)
Metamer Rás, 123 (*Meṭámír*)
Miltanah Rás, 16 (*Muteïnah*)
Minna Bay, 202 (*Minnah*)
Miune Island and Reef, 168 (*Miyún*)
Mithahact, 137 (*Meláḥát*)
Mocha Town and Road, 2, 3, 4 (*Mokhá*)
Moghady Island, 138, 149 (*Mojeïdí*)
Moilah Village and High Peak, 106 (*Mowílah*)
Moilah Mountains, 118
Mombaruck Mirza, 195 (*Má Mubárah Mersa*)
Momed Jibbel, 39 (*Momedd Jebel*)
Mooburuck Mersa, 157 (*Mubárak Mersa*)
Moolgamaree Islands, 53, 58, 87 (*Ummu-l Ḳomárí*)
Mooshedgerah Island, 11 (*Mushejjerah*)
Mooskka Island, 69 (*Muskah*)
Moosmaree Reef and Island, 76, 149 (*Musárí*)
Morah Rás and Jibbel, 130 (*Maurekh Rás*)
Monastery, Greek, 118
Mousa Village, 15 (*Músa*)
Moyah Sherm, 108 (*Móyah, Sherm el*)
Mousetrap Bay, 176
Mucdum Ras, 162, 163 (*Makdam Rás*)

Muckram Village, 19 (*Makram*)
Muctar Redgmah, 73 (*Maḳṭa'er rijmah*)
Muffiagane Island, 32 (*Maflaḳeïn*)
Mugda Ras, 163 (*Maḳdam Rás*)
Mugdgoor Island, 33 (*Ma'júr*)
Muggeradeeb Reef, 84 *Maḳarr ed-díb*)
Muggulat Ras el, 33 (*Rás el Maḳalát*)
Mugomish Island, 200 (*Maḳammash*)
Mugrabeah, 69 (*Maghabíyah*)
Mujowa Sherm, 202 (*Mujawwah*)
Mulluk Island, 146 (*Malak*)
Mummarle Kebeer, 55 (*Mamáliḥ Kebír*)
——— Segeer, 55, 66 (——— *Seghír*)
Mundaloo Anchorage, 158 (*Mandalú*)
Munthak Island, 41, 42 (*Manḍhakh*)
——— Jibbel, 39 (——— *Jebel*)
Murbut Sheikh, 101 (*Mirbaṭ Sheïkh*)
Murdounah Island, 101, 102 (*Mardúnah*)
Murmah Island, 71 (*Marmạ*)
Murrak Island, 47 (*Marrák*)
Mursataban Island, 141 (*Mata'bán*)
Mushabeah Island and Reef, 100, 101 (*Maṣábiḥ*)
Mussahrib Ras, 27, 86, 96 (*Muṣághiḅ*, for *Muṣábegháh*)
Mussarmroo Island, 170 (*Musámarhu*)
Mustoorah Ras, 92 (*Mastúrah Rás*)
Mustarmila Island, 138 (*Musta'milah*)
Mustubbud, and Reef, 73, 84 (*Mastábaṭ*)
Mutatoo Island, 71, 72 (*Matáthu*)
Mutbarhane 55, 66 (*Maṭbakheïn*)
Muthar Shab, 63, 71 (*Muḍhárr Sha'b*)
Mutterhane Island and Rocks, 43, 66 (*Maṭraḥeïn*)
Mutweer Ras, 50 (*Maṭwiyah Rás*)
Muzzaguff Island, 35, 36 (*Mazáḳif*)

Myetta Island, 179 (*Mayeïtah*)

Naboogier Island, 104 (*Nabaḳíyah*)
Nahelej Island, 153 (*Náhelej*)
Nahood Core, or Mersa, 51, 56, 86 (*Nohúd Khaur*)
Namahn Island Anchorage, 104, 105 (*No'mán*)
Nar Jibbel, or Barn, 4 (*Nár Jebel*)
Nazer Shab Reef, 91 (*Naẓar Sha'b*, Fire Mt.)
Near Hill, 131, 137
Nokerah Island and Core, 152, 154 (*Nakhrah Khaur*)
Nora Hadassee Island, 142 (*Nórah Adá-sí*)
Nóra Island, Good Water, 142, 147 (*Nórah*)
North Bluff, 129
North Hill, 76, 137
Northern Channel, 114
Nowarat Core, 159 (*Nowárát Khaur*)
——— Directions for, 160
Noweeby Point, 203 (*Nawíbí*)
Nusseeb Shah, 39 (*Naṣíb Sha'b*)

Ocbane Island, 20, 21, 26 (*'Okbán*)
Omaider Island, 203 (*'Omeïder*)
Omel Curra Island, 36 (*Omm-el Ḳura*)
—— Currip Island, 36, 86 (—— *Ḳaríb*)
—— Hamath Island, 32 (—— *Hammádh*)
—— Hussel, or Sale Sceah Island, 34 (—— *Ḥaṣal, Seïl Siya'*)
—— Zahul Island, 48 (—— *Záhil*)
Ome Kergane, 52, 57, 86 (*Omm Ḳerḳán*)
Ommarlee Island, 146 (*Omm 'Alí*)
Omes Sale Island, 147 (*Omm es Seïl*)
—— Sarridge Island, 130 (——— *Ṣahríj*)
—— Nyul Island, 149 (——— *en Náyim*)

Omul Grushe Island, 181 (*Omm el Ḳurúsh*)
One Fathom Patch, 34
Oomarrar Hill, 76, 77 (*Umm 'Ar'ar*)
Oomul Abbas Ras, 193 (*Ummu-l 'Abbás Rás*)
Oubhoor Sherm, 88, 90 (*Ubḥur Sherm*)
Oucan Island, 138, 149 (*Aúkán*)
Ourata Ras, 129 (*Ura'tá Rás*)
Outer Gateway, 79
—— Channel, 62
—— Cluster of Reefs, 78
—— Reef, 87
—— Reefs, 183
Overfalls, 193
Owce Terree Mersa, 175 (*Awí Terí Mersa'*)
Owee Teree, 184 (*Awí Terí*)
Oyster or Fisherman's Rock, 2

Palinurus Reefs, 98
Paps Hills, 157, 183
Patches N.W. of Theran Island, 55
Peaks, 1st and 4th, 157
Perim Island and Harbour, 1, 2, 5 (*Perím*)
Petroleum Point and Wells, 117
Pile and Quoin Island, 14
Ptolemais Therōn (ancient), 159

Quoih Mersa, 165, 172, 184 (*Kuwaï Mersa*)
Quoin Hill, 134, 159, 182, 183
—— Rock, 26
—— and Pile Islands, 14
—— Island, 11

Rabah Sale Island, 147 (*Rab'ah*, or *Bal'ah Ṣeïl*)

Rafer Berree Island, 33, 35 (*Ráfah Berrí*)
Rahab Jibbel, 92 (*Raḥab Jebel*)
Rajuma Island, 130 (*Rijyumah*)
Raker Anchorage, 63, 88 (*Rákah*)
Rarrat, 158 (*Rárat*)
Ras Abeed, 158 (*Rás 'Abíd*)
Rasher, 18 (*Rishshah*)
Remain Island, 35 (*Remeïn*)
Remarkable Bluff, 39
Rhabuc Sherm, 91 (*Rábigh Sherm*)
Riackah Island, 102, 103, 104 (*Raïkhah*)
Ring Reef, 70
Rockgadah Island, 33 (*Roḳkádah*)
Rock Island, 11, 190
Rocks above Water, 11
Rocky Patch, 40
Rocky Shoals, 58
Romea Island and Shoals, 144, 145, 148 (*Rómiyah*)
Round Hill, 137
——— Island, 11
——— Mountain, 97
Roway Ras and Reef, 179, 181 (*Rás Raweyyah*)
Ruckah Island, 138 (*Rákah*)
Ruckle Island, 30 (*Rakl*)
Ruckma Cape and Island, 125, 126 (*Rakhmah*)
Ruckerbut Chuddore Jibbel, 49 (*Raḳebaṭ Khuḍaïr Jebel*)
Rudduah Mountains, 96 (*Ruḍhwa*)
Rugged Islands, 25, 26
Rugged Peak, 129
Rugguan, 73 (*Raghwán*)
Rumlar Aboo, 203 (*Ramlah Abú*)
Russeeb Ras, 42 (*Rás Rasíb*)
Ryah Sheikh, 113 (*Rayyah Sheïkh*)

Saba Island, 25 (*Saba'*)
Sabeeah Island, 69 (*Sabíyah*)
Saddle Hill, or Shar Kerrib, 174
————, or Jibbel Addar, 76, 77
Sabyer Island and Jibbel, 58 (*Sabáyah*)
Saddle Island, 25, 26
Safadger Island, 198 (*Safájah*)
Salaka, 176 (*Saláḳa'*)
Salaka outer Anchorage, 177
Salat Village, 150 (*Sálaṭ*)
Sailing Marks for Jiddah, 79, 80
Sale Abbelat Island, 127 (*Seïl 'Abelát*)
—— Abado Island, 39, 42 (—— *'Abádho*)
—— Addar Island, 171 (—— *Ad-dár*)
—— Arabee Island, 140 (—— *'Arabí*)
—— Amber Island, 145 (—— *'Anber*)
—— Amber, 149 (—— ————)
—— Badeera Island, 146, 156 (—— *Badírah*)
—— Bar Island, 158 (—— *Baḥr*)
—— Bayuice Islet, 153 (—— *Bayús*)
—— Hadasse Island, 142 (—— *Adasí*)
—— Harmeel, 144 (—— *Harmíl*)
—— Macowa Island, 48 (—— *Makawwar*)
—— Nora Island, 142 (—— *Nórah*)
—— Rabah Island, 147 (—— *Bal'ah*)
—— Rubbah Island, 34, 35 (—— *Rubá'*)
—— Seeah, or Omel Hussel I., 34 (—— *Siya', Omm-el Haṣal*)
—— Segun Island, 141 (—— *Siḳan*)
—— Shertef Island, 37 (—— *Sherṭef*)
—— Tunnum Island, 145 (—— *Ṭanam*)
Salma Island, 138 (*Sálimah*)
Samama Roads, 73 (*Somcïmah*)

Sana Island, 33 (*Ṣan'á*)
Sandy Peak Island, 12
Sandy Island, 19
Sarso Island, 45 (*Sársó*)
Sardeeah, 73 (*Sa'dïyah*)
Sarridge Jibbel, 131 (*Ṣahríj Jebel*)
Sayeen, or Dulkoss Island, 140 (*Sáyín*, or *Dhú-l koss*)
Sayel Hassheesh Islets, 199 (*Seïl Ḥashísh*)
Sayel Village, 45 (*Sayyál*)
Scragged Hill, 97
Seaoul or Clive Islands, 110, 114 (*Saháwil*)
Seajarn Jibbel, 1, 5, 8 (*Síján Jebel*)
Sebain Jibbel, 27 (*Seba'ín Jebel*)
Seberget, or St. John's Island, 190 (*Zeberjed*)
Seeall Islands, 189 (*Siyyál*)
Second Cluster, 184
——— Outlet, 184
——— Peak, 74
Sedour Ras, 124 (*Ṣudúr Rás*)
Seerboot Ras, 128 (*Sírbút Rás*)
Segarla Island, 138 (*Seghálah*)
Selwan Island, 46 (*Selwán*)
Senaffer Island, 107, 108, 118 (*Ṣenáfir*)
Serabar, 157 (*Theraubah*)
Serome, 53 (*Seróm*)
Seranne Island, 61, 87 (*Surreïn*)
Shaabane Patch, 78 (*Sha'beïn*)
Shab Suflamy, 94 (*Sha'b Sufláni*)
Shab ul Abbeat, 92 (*Sha'b ul Abyaḍh*)
Shadwan Island, 109, 110, 111, 112, 113 (*Shidwán*)
Shager Jibbel, 64 (*Shaḳah Jebel*)
Shaker Island, 70 (*Sháker*)
Shakkub Ras, 161 (*Shakab*)

Shamah Ras, 27, 28 (*Shámah*)
Sharbane Island, 69 (*Sharbeïn*)
Shaybah, 73, 98 (*Sho'aïbah*)
Shaybarah Island, 100 (*Sheïbárah*)
Shar Kerrib High-land, 174 (*Sharr Ḳeríb*)
Shear Shab, 198 (*Shíyah Sha'b*)
Shedger, 73, 84 (*Shej'ah*)
Sheikh Amarah, 103 (*Sheïkh 'Amárah*)
——— Baroud Mersa, 173 (——— *Barúd Mersa*)
——— Murbut, 101 (——— *Mirbaṭ*)
——— Ryah, 113 (——— *Rayyah*)
——— Sherm, 109, 194 (——— *Sherm*)
Sheikhdele Sherm, 119 (——— *'Adíl Sherm*)
Sheikh Saad Mersa, 163 (——— *Sa'd Mersa*)
Shereteeb Ras, 121 (*Sharáṭib Rás*)
Sherayer Ras, 126 (*Sheráyir Rás*)
Shetevo Jeseerat, 160 (*Jezíraṭ Sheṭírah*)
Sh'harree Village, 15 (*Saḥḥárí*)
Shifting Peak, 51, 52
Shinab Core or Mishmish, 182, 187 (*Shináb Khaur*)
Shoals in the centre of the Sea, 205
Shookake, 49 (*Shuḳeïḳ*)
Shoorah Island, 37, 86 (*Shúrah*)
Shoorame, Good Water, 17 (*Shureïm*)
Shooshoah Island, 107, 118 (*Shú'shú'ah*)
Shore Hill, 131
Shubback, 13, (*Sahabaḳ*)
Shuckhs Ras, 129 (*Shakhṣ Rás*)
Shukhair, 119 (*Shukheïr*)
Shummar Island, 150 (*Shummá*)
Shyir Shab, 71 (*Sha'ír Sha'b*)
Sillah Islands, 105, 106 (*Ṣilah*)
Simer Island, 35, 55, 66, 67 (*Simer*)

Sinai Mount, 118 (*Smá*)
—— Peninsula, 107, 108
Sindee Sarso Island, 45 (*Sindí Sársó*)
Single Peak, 129
Sintuar Ras, 6 (*Sintiyár Rás*)
Sisters Hills, 89
Small and First Peaks, 9
Small Peak, 178
Small Island, 34
Soedah, 73 (*Saudah*)
Sonnam Peak, 76 (*Ṣanam*)
Soober Island, 138, 140 (*Zauber*)
Soolaim Shab, 71 (*Suleïm Sha'b*)
Soubah Jibbel, 94 *Ṣubḥ Jebel*)
South or Mehabeese Island, 193
—— Reefs and Anchorage, 193
—— Peak, 4
Suakin Core and Town, 163, 164 (*Sawákin Khaur*)
——— Entrance, 171
——— Inner Channel, 165
Subbah Shab, or Seven Reefs, 94 (*Sab'ah Sha'b*)
Suez Bay, 123. (*Suweïs*)
—— Anchorage and Town, 125
Suffenot Shoal, 168 (*Safínaṭ*)
Suffer Jibbel, 39 (*Safar Jebel*)
Suflamy Shab, 94 (*Suflání Sha'b*)
Sugar Loaf Hills, 24, 73, 97, 127, 157, 159
Suggeed Core, 39, 41 (*Khaur Ṣeghír*)
Sulam Ras, 199 (*Salám Rás*)
Sule Harnish Islands, 10 (*Suyúl Ḥánish*)
Suleim Shabb, 71 (*Suleïm Sha'b*)
Summar Anchorage, 154 (*Sumár*)
Sunnahboar Island, 7 (*Sanáh-bár*)

Surad Island, 154 (*Ṣarad*)
Suratoo Island, 145 (*Isra'tu*)

Table Hill, 176
—— Hill (Safadger Island), 199 (*Safájah*)
—— Mound, 176
—— Peak Island, 25, 26
Tedgar Island, 69 (*Tedhkár*)
Teer Jibbel, 26 (*Jebel Ṭeïr* or *Ṭír*)
Tellahtellah Kebeer Island, 170 (*Tellah Tellah Kebír*)
———— Seggeer Island and Reef, 169 (—— *Ṣeghír*)
Terrah Island, 153 (*Ente'ráhiyá*)
Third Cluster, 184
Third Outlet, 184
Theran Island, 38, 55, 86 (*Ṭirán*)
Thetis Reef, 94
Three Sisters, or Jibbel Mousa, 16 (*Jebel Músa*)
Tibtah Bay, 39, 47
Tides, 110
Timershear Island, 170 (*Taïmashíyah*)
Tirahn Island, 88, 107, 108, 118, 201 (*Ṭirán*)
——— Peak, 108
——— Straits, 108, 201
Toag Island, 31, 56 (*Ṭowák*)
Tokaillah Island, 32 (*Dokeïlah*)
Tongue Island, 14
Tookfash Island, 146 (*Entu'kfásh*)
Toondebah Mirza, 194 (*Tundebah Mersa'*)
Toorfah Ras, 28, 29, 48, 86 (*Ṭurfá Rás*)
Toor Harbour, 109, 113, 118, 120 (*Ṭúr* or *Ṭór*)
Tor Island, 138 (*Ṭór*)
Toweel Rugguan Reef, 84, (*Raghwán*)
Tower Hill, 73, 74

Towwelah, 83 (*Ṭawílah*)
Trabur Jibbel, 178 (*Ṭaríbah Jebel*)
Trickatatah Anchorage, 162 (*Tarinj-hátah*)
Trombee Mirza, 195 (*Torónbí Mersa'*)
Tullowain Island and Reef, 29 (*Ṭulówe'in*)
Tumble-down Peak, 12
Tunnum Islands, 145 (*Ṭanam*)
Turruck, 82 (*Ṭuruk*)
Tuse Sharm Jibbel, 51, 52 (*Ṭúsí Shám Jebel*)
—— Yemmenee Jibbel, 52 (—— *Yemení Jebel*)
Tybut Issum Bluff, 202 (*Ṭayyibat Ism*)
Tyflah Islands Anchorage, 177 (*Ṭiflah*)

Ulgaff Town, 164 (*El-ḳaff*)
Uleusser Elyemmarneer Reef, 85 (*Alḳaṣr al Yemáníyah*, Southern or Right Castle)
———— Shamier Reef, 85 (———— *Shámíyah*, Northern or Left Castle)
Ulfogarnee Rocky Patch, 77 (*Alfauḳání*)
Ul Gereef Bank, 57 (*Al Gherí'f*)
Ul Uswud Ras, 73, 75, 76 (*Al Aswad Rás*)
Ul Waish, 102 (*El Wej-h*).
Ul Wustarnee Rocky Patch, 77, 78 (*Al Wasṭání*)
Umal Bisran Island, 45, 46 (*Umm al Bisrán*)
Ummusseefah Island, 53, 58, 87 (*Ummu-s-ṣaïfah*)
Umbarrack Shab, 70 (*Mubáruk Sha'b*)
Undareh Anchorage, 53 (*Andáḥ*)
———— Reef, 58 (————)
———— Roads, 86 (————)
Undee Selle Island, 170 (*Andí Selí*)
Unduddah Ras, 130, 131, 149 (*Andaddah Rás*)
Untoentore Island, 143, 145 (*Enta'entór*)
Urbeed Shab, 68 (*Rabíd Sha'b*)

Urgo Gorab Reef, 85 (*'Irḳ-el-ghorâb*)
Usbob, 144 (*Asbâb*)
Ushruffee Islands, 110, 115, 116, 117 (*Ashrafi*)

Waddee Jumaul Island, 194 (*Wádí Jemál*)
Waddy of Arabah, 204 (*Wádí-l 'Arabah*)
——— Lehuma Mirza Anchorage, 192 (*Wádí Leḥamah*)
Warrantor Hill, 164 (*Warantah*)
Warsut Point, 199, 202 (*Wásiṭ*)
Wedge, 102 (*Wej-h*)
West Peak, 74
White Quoin Hill, 126
Widan Anchorage and Jibbel, 49, 55 (*Widán, Jebel*)
Widri Jibbel, 83 (*Widrí Jebel*)
Windy Cape, 202
Wooster Island, 145 (*Wusṭah*)
Wussaleat Islands, 66, 67 (*Waṣaliyát*)
Wussim Hill, 51 (*Wasm*)

Yahbis Aboo, 158 (*Yábis, Abú*)
Yarhour Sherm, 106 (*Yáḥurah Sherm*)
Yembo Port, 93, 94, 95 (*Yenbo'*)
——— Sherm, 96 (———)
Yemeneer Jibbel, or Sugar Loaf, 76 (*Yemeníyah Jebel*)

Zafarana Point or Cape, 122, 123 (*Za'feran Rás*)
Zebara Mirza, 195 (*Zebárah Mersa*)
Zebayer Islands, 25 (*Zebáyir*)
Zebeed Ras and Shoal, 16 (*Zebíd Rás*)
Zeitee Bay and Point, 117 (*Zeïtiyah*)
——— Peninsula, 109, 110, 115, 116 (———)
Zee Hill and Reefs, 2 (*Zí*)
Zelfeef Islands, 45, 46 (*Zá-l-f'if*)

Zelima or Selima Ras Anchorage, 121 (*Abú Zelímah Rás*)
Zinder, 34 (*Simer*)
Zinier Island, 33, 35 (*Simer*)
Zoha Island, 30 (*Zohá*)
Zoogabe Ras, 60 (*Zugheïb Rás*)
Zoogur Jibbel, 12 (*Zuḳur Jebel*)
Zoorat Islands, 34 (*Zuhraṭ*)
Zoorbat Island, 29 (*Zurbaṭ*)
Zudge Island, 30 (*Zajj*)
Zuggak Island, 68, 99 (*Zuḳáḳ*)

THE END.

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